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THE PROCESS AND LEVEL OF MILITARY INTERVENTION IN THE STATES OF TROPICAL AFRICA, 1960-1971

by

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ABSTRACT

THE PROCESS AND LEVEL OF MILITARY INTERVENTION IN THE STATES OF TROPICAL AFRICA, 1960-71

by

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Recent studies on political development and military institutions have tended to explain political intervention by the armed forces of developing countries by examining either the organizational characteristics of the military establishments or the development context in which these military establishments operate. This study presents the view that while corporate factors may explain the process of intervention in the short run, changes taking place in the social, economic and political environment can best explain the level of military intervention existing in a specific country.

After the presentation of a brief survey of the literature and the elaboration of an analytical grid, Part II of this study surveys the major organizational transformations which have affected African military forces and which can serve to explain their decision to intervene actively in the political process. This historical

reconstruction of the process of military intervention led to an explanation which stresses the vulnerability rather than the strength of African military organizations as the major reason for their involvement in politics. Because of the nature of their output, their recent creation and the permeability of their boundaries, African military organizations are shown to be easily threatened by changes taking place in their environment. Military coups occur when a military organization decides to use its institutional weight to modify its environment so as to insure its corporate survival.

Part III of this study investigates by a quantitative methodology some of the changes taking place in the economic, social and political environment of Tropical Africa to determine if they can be correlated with the present level of military intervention in these states. Six major environmental changes were identified (economic development, social mobilization, political participation, party institutionalization, government penetration and social conflict) and operationalized through the use of factor analysis. The level of military intervention was operationalized by examining the extent to which a military establishment breaks out of its organizational boundaries to occupy roles outside those normally associated with its defence function. Data on the level of military intervention was collected for each year of the 1960-71 period and then aggregated into a final index of military intervention for the 32 states of Tropical Africa. Three analytic techniques were then used on these data.

By simple bivariate correlation it was established that the level of military intervention was positively associated with the level of internal conflict and of party institutionalization in a given society. Levels of government penetration and of political participation were also associated with the dependent variable, but in a negative way and at a less significant level.

When step-wise regression analysis was employed, the same results emerged. Furthermore, the six independent variables taken together explained 40 per cent of the variance in the level of military intervention.

Using the technique of dependent analysis developed by Boudon, it was established that only the level of social conflict made a direct and substantial contribution to the level of military intervention. The influence of the other variables was apparently dependent on this last variable.

In conclusion, it is stressed that the process of military intervention is amenable to an organizational and historical analysis and that the characteristics of the socio-political environment in which a military establishment operates can make a significant contribution to an understanding of the level of military intervention existing in the states of Tropical Africa.

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(Thesis Supervisor)

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WITH A LITTLE HELP FROM MY FRIENDS

It is a pleasure to record the many debts incurred in the preparation of this dissertation. I would first like to thank Morris Janowitz who provided the original idea for this dissertation. Later Michael Wallace, Jean Laponce, Robert Jackson and Kal Holsti provided many suggestions and insights concerning the study. Michael Wallace, in particular, devoted many hours from his homes in Vancouver and Ann Arbor, to the task of supervizing a thesis concerned with Africa, but written mainly in Vancouver, Chicago or Montréal. I also owe large debts to the researchers of the African National Integration Project of York University who provided the empirical data for this study. Financial assistance made available by the Canada Council also allowed me to complete the research for this study. Without the programming expertise of Ronald Alepin, few of the calculations in this study could have been performed correctly. My thanks also go to Linda Collier, Fern Miller and Paula LaPierre who patiently read over earlier versions of the manuscript and identified some of its most obvious flaws.

INTRODUCTION

At the time of this writing (June 1972), there have been 26 successful military take-overs and 18 attempted coups among the 32 countries of Tropical Africa since 1960. If only because of their number, such overt military interventions have become an important aspect of African politics. However, even more important than its frequency, is the totally unexpected nature of this phenomenon.

Barely a decade ago, no one predicted a political role of any kind for the new African armies. History textbooks completely ignored their existence (Brunschswig, 1963; Chailley, 1968); nor were they mentioned to any extent in the first bibliographies on the armed forces of developing nations (Blankstein, 1964; Land, 1964; Lissak, 1964).[1] One early study of sub-Saharan Africa suggested that African countries "lack what many new states of the former colonial world have had, namely, an army which. . . could be called in, or could take over (Coleman, 1962, p. 359)." This same study concluded that African armies were unlikely to follow the lead of their Latin American and Middle Eastern counterparts, but would instead limit themselves strictly to their defence responsibilities. As late as 1965, one observer could still conclude that more than any other continent at any time in world history "Africa is led by pen-wielding intellectuals, rather than by the modern equivalent of saber-rattling men on horseback (Van Den Berghe, 1965, p. 12)." In the same vein Gutteridge predicted that African armies would not intervene in politics

because they "lack the necessary professional cohesion and have not sufficient technical know-how to be regarded as uniquely capable of running a country (1965, p. 144)."[2]

This prognosis was supported by apparently strong empirical evidence. African armies had no indigenous military tradition nor, as in Latin America, did they have a long history of caudillism. Secondly, African armies had played no role in the struggle for independence and thus had not reached a position of political prominence. Finally, many African national armies had formally been created only months before independence was achieved and did not control a significant portion of the national budget.

Moreover, in 1960 the African political systems did not exhibit any signs of immediate collapse which would be likely either to necessitate or facilitate a military intervention.[3] Having led their countries to independence, African nationalist leaders appeared firmly in control. If any problems of political leadership were foreseen it was expected that they would come from the authoritarian and charismatic nature of the new nationalists' leadership rather than from any lack of strength. Also political institutions, parties, legislatures and civil service, had all evidently survived both the transplant to African and the transition from colonialism to national independence. They seemed unlikely to collapse in the near future.[4] While many foresaw the very real problems of elitism, corruption, tribalism and underdevelopment, even the most pessimistic observers did not foresee the danger of military intervention.[5] Yet, by

1970 the military were in full political control in ten countries and had actively intervened in the political process of eight more.[6]

This rapid transformation of the African armies from a strictly military to a political role is the subject of this study. What forces, both within the military organizations and in the economic, social and political environment, brought about this transformation? Can the specific impact of each set of factors be identified? Was the collapse of the organizational boundaries of the African armies already inherent in the characteristics of the colonial African regiments? How important were the intrigues of the former colonial powers? Can the specific factors which determine the level of military intervention be identified? These are the basic questions which the study seeks to answer.

A study of the process of the military's entry to the political arena may also be relevant to a number of more general issues. To begin with, it is hoped that some of the problems connected with the creation of viable African states will be raised in a more systematic context. The concept of development which has served as the major analytical tool for the study of the politics of Latin American and Afro-Asian states has recently come under attack because of its close association with the Western historical experience, and because of the difficulties connected with its systemic and empirical application.[7] The following analysis of military coups, although it does not formally make use of the concept of development, may contribute to this debate by facilitating the

identification of those epistemological and empirical conditions under which the concept of development can contribute positively to an understanding of one aspect of the political process in the non-Western world, namely military coups.[8]

Second, by offering a systems-oriented analytical grid and by using it to analyze the historical development of African military organizations, it is hoped that a new paradigm for the study of political intervention of the armed forces of developing countries may result. There are now two such competing research strategies. The first applied mainly by sociologists, emphasizes the bureaucratic, professional and ideological aspects of the military as a modern profession to explain its political involvement. The second research strategy, put forward mainly by political scientists, emphasizes those aspects of the social, economic and political environment in which the armed forces operate.

Neither sociologist nor political scientists have dismissed the possibility of links between the socio-political and the organizational variables, but the precise nature of these links has yet to be specified.

Third, we hope that this study will show the feasibility of integrating the traditional approaches of historical and sociological

analysis with the most recent breakthroughs in quantitative methodology.

To the extent that these questions can be answered there is a fourth area to which this study may contribute, that of the sociology of social organizations. What parameters determine the permeability of an organization's boundaries? What are the consequences for the internal functioning of an organization of a radical modification in that organization's goals? How can an organization use its institutional weight to redefine its environment?

This study falls into three parts. The first reviews the political and sociological approaches to the study of military intervention and then suggests a framework within which both approaches can be integrated to allow for a differentiation between those factors which set in motion the process of military intervention and those factors which determine the level at which military intervention will exist in a given African country. Seeking to answer the first of these questions, Part II provides a detailed examination of the African armed forces as organizations and institutions, their colonial origins, their transformation into national armies and the changes undergone after independence. Part III attempts to identify in an empirical and causal fashion those factors in the African political and socio-economic environment which determine the level of military intervention existing in each African country.

NOTES AND REFERENCES TO INTRODUCTION

1. When simple citations are involved we used the author's name and publication date in the text. The full titles can be found in the bibliography. An exception was made for Debates of Legislative Assemblies which are fully cited in the text.

2. This interpretation was not limited to American or British observers. In a colloquium held at Dijon in December 1962, the French social scientist Léon Hamon expressed the view that African armies were unlikely to rebel:

> Je crois que les organismes politiques ont pris une avance trop forte dans l'occupation du pouvoir; par suite de circonstances locales l'armée aura, me semble-t'il, trop peu d'occasions de se couvrir de prestige et de lustre. (Hamon, 1966, p. 104).

   Shils (1962) has expressed similar views in a 1959 colloquium sponsored by the Rand Corporation.

3. The Congolese episode of 1960 was seen only as an illustration of the total failure of the Belgian colonial experience, not as the fore-runner of similar situations to come (Hoskyns, 1961; Weiss, 1965).

4. On African one-party rule and the controversy as to its contribution to political development see Coleman and Rosbers (1964), Hess and Loewenberg (1964), Morgenthau (1964), and Zolberg (1964). On the problems of charismatic political leadership see Apter (1969), Mazrui (1967) and Tiger (1964). On western political institutions and their transfer to Africa see Burke (1967), Price (1967) and Riggs (1964).

5. One area where difficulty was anticipated was the new elites being formed in the universities. On this problem see Dubois (1965), Lloyd (1966) and Wallerstein (1965).

6. The first group includes Burundi, Central African Republic, Congo-Brazzaville, Ghana, Mali, Somalia, Sudan, Togo, Uganda and the Upper Volta. The second group includes the Congo-Kinshasa, Dahomey, Ethiopia, Gabon, Kenya, Nigeria, Sierra Leone and Tanzania.

7. For a comprehensive critique of the concept of development as it is used by the majority of American social scientists see Baran (1957).

8. Throughout this study, the expressions "under-developed countries", "Third World" or "developing nations" will be used interchangeably. No specific ideological connotation is attached to any of these terms. The term Africa will also be used to describe what is not properly speaking Africa but Black Sub-Saharan Africa.

PART I

MILITARY INTERVENTIONS IN THE STATES OF TROPICAL AFRICA: A SURVEY OF THE LITERATURE AND A FRAMEWORK FOR ANALYSIS

CHAPTER I

MILITARY INTERVENTIONS IN THE STATES OF TROPICAL AFRICA: A STUDY OF THE LITERATURE

The purpose of this chapter is to examine the various hypotheses and theories which attempt to explain the occurence of military coups in Tropical Africa. The reader may find that few full-scale theories of African military coups are given any close attention while several minor attempts at explanation of this phenomenon are analyzed in some detail. The reasons for this emphasis are both practical and methodological. An extensive search of the literature revealed that the major theoretical contributions to the study of civil-military relations in developing countries (Janowitz, 1964; Huntington, 1968; Levy, 1962; Shils, 1962) made little or no mention of the African situation. At the same time, because they are a relatively new phenomenon, African military coups have not yet been the subject of systematic empirical studies. Nor have they given rise to any major theoretical analyses. As a result, the available literature consists largely of short case-studies or journalistic interpretations.

The orientation of this survey also aims to avoid some of the most common errors of similar **surveys.** For example no attempt will be made to demonstrate the uniqueness or superiority of the subsequent study. The aim is not to arrive at an exhaustive evaluation of the current state of research on the causes of military intervention, but only to define

those coordinates which place this particular study within the frame-work of the wider research effort now in progress. Instead of assessing the empirical validity of selected explanations of African military coups this survey will attempt to show that a close reliance on western models of military professionalism and political development has led to the adoption of two basic, but distorted, explanations of the phenomenon of African military coups. In the process it will become clear that these two explanations would benefit from an integration of some of their elements.

One group of researchers have stressed the internal characteristics of African military establishments as the cause of their intervention in the political process. By projection of the organizational format of European armies, African military institutions are presented as modern, cohesive, non-political and professional organizations whose intervention is guided by a concern for the nation and its survival. This approach will be designated as the organizational explanation.

The second approach has emphasized the process of social, economic and political development as the cause of African military coups. In this case it has been suggested that African countries have undergone rapid social and economic transformation, putting increased demands on the existing political institutions which have proven unable to fulfill these demands. Military coups are seen as the result of this breakdown or threatened breakdown in the overall process of modernization. This approach will be referred to as the developmental explanation.

Among sociologists and political scientists these organizational and developmental explanations are not as mutually exclusive as this survey would tend to indicate. To some extent the differences have been over-emphasized in order to make more explicit and coherent this presentation of an ever-expanding field of research.

These two interpretations in fact share a common vision of the causal link between African armies and their decision to intervene politically. Both interpretations picture the military as being involuntarily drawn to intervene in order to lead their country back on the road to modernization and internal stability. As we will attempt to show, this vision does not appear to correspond to the historical reality and thus may have given rise to questionable generalizations on the phenomenon of African military coups.

The Organizational Approach to Military Coups in the States of Tropical Africa

Accepting the assumption that "compared with other institutions and bureaucracies, the military establishment has a variety of common organizational features (Janowitz, 1964, p. 28)," military sociologists have selected five characteristics of the military's internal structure as predictors of their political behavior: their functional and national definitions, the social background of their officer corps and their corporate and ideological formats. The following sections will examine the interpretations of African specialists as to the influence of each of these characteristics on military interventions in Tropical Africa.

1. The orientation to violence of African armies as a cause of coups d'état

Because armies are oriented toward the exercise of violence, either threatened or actual, they are said to possess a close control over the instruments of this violence. According to Janowitz (1964) this control provides the military with both the possibility and the pretext for a military coup. A coup is thus never outside the realm of possibility for the military as it would be for a group of doctors or lawyers, because to succeed in staging a coup, the military does not need to mobilize skills and resources not normally available to it. Janowitz therefore argues rightly that for the military there is nothing extraordinary in thinking about a military coup, since the possibility of such action is inherent in the concern with violence of any military establishment.

This perspective has been accepted by a number of students of African coups who suggest that western observers have exaggerated the impact of African military coups because a similar event would be so traumatic if it was to take place in Europe or North America. For example, as Lantier points out:

> Il ne faut pas trop s'illusionner sur des histoires de képis ou de chapeaux mous qui, en Afrique, n'ont pas grande signification. Les régimes militaires ne diffèrent guère des autres que par le goût qu'ont leurs dirigeants pour les uniformes, les dorures et les décorations (Lantier, 1967, p. 171).

Although it is always possible to discover reasons which explain the military's actions, these reasons, according to Decalo (1965) and Snyder (1969), are only post-facto reconstructions based on a logic which rarely corresponds to actual events. As noted by Corpierre (1966) the coup in Africa should not be seen as a traumatic political event but simply as a "routine military exercise (p. 44)." According to O'Connell (1967) in our search for a rational explanation we may have overdramatized a phenomenon which has simply replaced elections as the most efficient and troublesome means of effecting political change.[1]

These authors suggest that military coups have taken place in Africa because it is both possible and easy for the army to carry them out. Empirically this hypothesis has received some support because of the absence of any discernable pattern in the instances of military take-over in Africa. Large and small countries, radical and conservative governments, and former French and British colonies have all been the targets of such coups. However, this hypothesis eventually leads to an impasse: if coups are the results of a random process there must still be some explanation as to why they have occurred repeatedly in certain countries and never in others. Because of this fact it would appear that in Tropical Africa control over the instruments of violence is a necessary but not a sufficient condition for the occurrence of a coup. In fact the basic aim of this study will be to show that African military interventions are not the result of a random process but of a set of causes, both in

the military organization itself and in the political environment, which will be identified and discussed below.

2. The national orientation of African armies as a cause of coups d'état

The orientation of the military as a national institution is frequently mentioned by military sociologists as a second major cause of military coups in developing nations. Janowitz (1964) and Welch (1960) both suggested that the military's ethos of public service and its identification with the nation-state often prompts it to intervene when the survival or even simply the stability of the political process is judged to be threatened. Similarly, Lefever suggests that African armies being "a more vivid symbol of sovereignty than the flag, the constitution or the parliament (Lefever, 1970, p. 21)," constitute an adequate and available alternative to corrupt civilian leadership.

In African states this definition of the army as a national institution has often been viewed as a particularly important parameter of its decision to intervene because of the presumed weakness of the central government and the absence of any other institution capable of making a similar claim. Not surprisingly this vision of the military as a symbol of national unity and as a repository of national virtues is shared by African military leaders. For example the young army officers who staged the third Dahomey coup in 1968 talked of their "special responsibilities before the Nation and before History (Afrique Nouvelle, Dec. 27, 1967)."

In Upper Volta, Colonel Lamizana spoke of the army as the "incarnation of Upper Voltan nationhood (Afrique, 53, March 1966, p. 12)." In Mali, the army considered itself the symbol of the Malian virtues of courage, dynamism and autarchy.[2] According to officers and military sociologists alike, the army, because it is the symbol of national independence and national unity, is forced to intervene when national unity is threatened by social unrest or when the integrity of the country is being undermined by outside agitators.

As we will note at length below this interpretation of African military coups does not differentiate between the causes of a coup and the justifications which facilitate the implementation of the coup. By identifying themselves with national unity and national independence the new military leaders are not so much expressing a concern for these goals but an uneasiness over the lack of popular support and the lack of legitimacy for their action.

3. The social background of the officer corps as a cause of coups d'état

Because of the importance of social class in the western sociological tradition, the social origin of the officer corps has often been looked upon as the major cause of military coups. Janowitz (1964) believes that the rural and middle-class origin of the officers in developing countries inevitably leads them to adopt a fundamentalist attitude in their vision of social problems. These problems are seen as consequences of the corruption, frivolities and lack of dedication of political leaders rather than as a result

of ideological and structural factors. Because they come from a different social milieu, military officers have developed very little empathy for the civilian elites and their way of solving problems. Therefore they have little reluctance in replacing them since such a move is rationalized as bringing an end to a decadent and corrupt administration.

However, Janowitz's interpretation of the link between the officers' social origins and their decision to intervene is not shared by all military sociologists. Pye (1962a, 1962b) has suggested that it is the similarities, not the differences, in the social origins of the civilian and military leaders that can lead the army to intervene, as in the Burmese coup of 1958.

In this case the close social and personal bonds between the civilian and military leaders, led the officers to feel as intimately acquainted with the problems of the country as the politicians. As a result they did not hesitate to replace them by staging a successful coup.

The most elaborate presentation of the "social origin" interpretation of military coups is Nun's (1967, 1968). He suggests that in Latin America the survival of a landed aristocracy combined with the rapid extension of electoral suffrage confronts the middle class with the problem of competing for power with both the upper and lower classes. In the battle for political control, the middle class cannot depend on the support of either the trade unions, which

are predominantly of working-class origin, or of the legislative bodies, which are usually controlled by the aristocracy. They can only count on the army which, because of the middle class origin of its officer corps, will act as "one of the better, if not the best, structured institution of the middle classes (Nun, 1968, p. 176)."

Recent empirical findings cast some doubt as to the empirical validity of this hypothesis as applied, although in different ways, by both Janowitz and Nun.[3] For example, at the end of his detailed study of the Brazilian military, Stepan concludes that the socio-economic origin of the officers corps is only a secondary cause of military intervention:

> For most officers so many life experience and career pattern variables intervene between their entry into the military school system . . . and their promotion to colonel or general 25 or 35 years later that the direct impact of socio-economic origin has been considerably weakened (Stepan, 1970, pp. 54-5).

Stepan found that the recent political experience, duties and life-styles of officers were better predictors of their political behaviour than their class origin.

In Africa, because of a lack of information on the social background of officers the social origin hypothesis has yet to be empirically verified.[4] However, it has been suggested that the tribal and not the social origin of the officers is an important variable in explaining their political behaviour.

In the case of the Sierra Leonese coup of 1966, Cartwright (1968) notes that most officers were Mende while the All-People's Congress party of Premier-elect Stevens against whom the coup was directed had its major strength in the non-Mende regions of the country.

In Burundi, Lemarchand (1970) has pointed out that the coups of July and November 1966 marked the end of Hutu political domination and the rise of a new leadership of Tutsi politicians and military officers. Mazrui has also offered an explanation linking tribalism to military coups, based on the following observation:

> For many African states, the golden age of modern politics coincided with the peak effort of nationalism. When the latter declined as a major determinant of political behavior, modern politics also declined as a nationalized phenomenon (Mazrui, 1969, p. 42).

This "de-nationalization" of politics has brought with it a strenthening of those tribal or ethnic loyalties which had, in fact, never completely disappeared. Inevitably, this "re-tribalization" has also affected the armed forces which have been drawn into this new arena of conflict either as participants or arbitrators. Convincing as it may appear Mazrui's thesis has yet to receive empirical support. Unfortunately until statistics on the ethnic composition of the African armed forces are available, this support will be lacking.[5] But already a preliminary investigation of the Nigerian coups of 1966 provides an alternate explanation to what are surely the most often cited examples of tribal coups. Having

pointed out that the Ibos were over-represented in the middle ranks, Luckham (1969) and Miners (1971) suggest that the February coup, because it had its origins in the professional grievances of the middle ranks necessarily involved Ibos as conspirators and non-Ibos as victims.

In the case of the coup of July 1966, where the roles of Ibos and non-Ibos were reversed, Luckham maintains that tribal reasons were important only to the extent that they "aggregated external political conflicts with the internal organizational strains of the army (Luckham, 1969, p. 224)." In both instances it is suggested that corporate and not tribal grievances were the immediate causes of the coup.

Here again then, empirical evidence of a direct causal link between the officers' social origin and their tendency to stage a coup is lacking. The lack of specific information makes it almost impossible for Africanists to apply some of the hypotheses which have been tested in other regions to African events.

4. <u>The corporate format of African armies as a cause of coups d'état</u>

Organizational features of the African armies are often mentioned as a cause of coups d'état. According to Pye (1961) the army is both a modern organization and a modernizing agent for its members. This organizational modernity of military organizations originated first in the need of the colonial authorities for updated, professional colonial forces which could be integrated within the

overall imperial defence structure. Second, because armies are inherently competitive institutions whose "ultimate function is the test of one against each other (Pye, 1961, p. 78)," they must try to meet the highest international standards if they are to survive on the battle-field. Finally, the modernity of African armies is said to be insured by the presence of foreign-trained officers who could implement western military models without opposition since African armies, like most armies, are free from day-to-day tests of efficiency.

The recruitment policy utilized within African armies is supposed to extend this process of modernization at the level of individuals. Military induction moves recruits out "of the particularistic relationships of traditional life and into the more impersonal and universalistic relationships of an industrialized society (Pye, 1962, p. 80)." Both Pye and Levy (1962) believe that this process of acculturation is carried out more thoroughly and rapidly within the army than by usual channels of education and urbanization. At the same time, because of the army's isolation within the social system, this acculturation takes place within a more stable and secure environment. Contrary to school boys or job trainees, military recruits do not have to return to the family household every evening. They are not subjected to the contradictory experiences of both a traditional and modern environment.

According to military sociologists this combination of individual and organizational modernity supposedly makes for a clearly-defined allocation of power and responsibility at all levels. It also favors a degree of rationality and of efficiency which is not present in other organizations (Levy, 1962, p. 588) and the development of a "skill structure which combines managerial ability with a heroic posture (Janowitz, 1968, p. 128)." This hierarchical infrastructure with its centralized command, its sense of discipline, its esprit-de-corps and its well developed system of internal and external communications is believed to encourage the military to want to impose some coherence on an unstable political order. Military sociologists therefore conclude that the military stands out as "the only effectively organized element capable of competing for political power and formulating public policy (Pye, 1961, p. 84)."[7]

This vision of the army as a model of organizational efficiency and modernity has been widely used to explain African military coups. According to Rivkin (1967) outside of the ruling political party in one-party states, the African army is the only other organized, identifiable and functioning institution or group. Newbury believes the African army has "a professional cohesion, an esprit-de-corps which makes it unique" and goes on to point out that in times of political chaos the African army benefits from "considerable administrative skills, a logistical potential, a communications system and a well-integrated hierarchy of command which has

few rivals (Newbury, 1967, p. 220)." Feit (1969a, 1969b), sees the small size of the African armies, far from being a deterrent to political intervention, as actually having contributed to the number of coups since such small forces are necessarily more coherent ideologically and less preoccupied with their traditional defence role than larger military establishments. Markovitz sees the African army as the technological organization par excellence and the military coup as "the logical, if not final, culmination of the tendency towards technology (1966, p. 11)."[8]

Recently Lefever has given the idea of the organizational superiority of the African army its fullest expression.

> African armies tend to be the most detribalized, westernized, integrated, and cohesive institutions in their respective states. The army is usually the most disciplined agency in the state. It often enjoys a greater sense of national identity than other institutions. In technical skills, including the capacity to coerce and to communicate, the army is the most modernized agency in the country. It is the best organized trade-union (Lefever, 1970, pp. 21-2).

According to Lefever, this organizational superiority inevitably leads to a coup "when a regime is too weak, corrupt, or arbitrary to govern" and must be replaced by the military so as to "avert disaster or effect reform (1970, p. 198)."[9]

5. The ideological format of African armies as a cause of coups d'état

Military sociologists have also suggested that the ideology of military professionalism encourages coups d'état in developing

nations. According to Janowitz, military professionalism presents the officer with an ambivalent self-image:

> On the one hand, the officer's conceptions of honor, purpose and human nature lead him to assume that he is a standard bearer, who embodies the superior virtues of men, yet, at the same time, he finds it expedient and necessary to present himself as a representative man, not different from other men, and part of the mainstream of contemporary society (Janowitz, 1960, p. 229).

In developing areas, particularly in countries with a long history of national independance, this ambivalence is further increased by the juxtaposition of the officers' desire to follow western military models and his desire to be faithful to his own military traditions and "protect himself against foreign principles (BeEri, 1969, p. 353)." In the case of Turkey, this ambivalence led the military to see itself both as the successor of the Ottoman military tradition and as the equal of the other NATO forces. According to Ozbudun (1966) and Weiker (1963) this dual image was influential in the Turkish army's decision to intervene in the political arena in 1960.

Similiarly Price suggests that in Africa the officer corps is caught between its self-image as the incarnation of national values and the "reference-group identifications with the officer corps of the ex-colonial power (1971b, p. 404)." According to this interpretation, this identification with and commitment to a set of foreign traditions, symbols and values affects the officers'

perception and interpretation of the performance of civilian leaders in the immediate, post-independance period. Whatever their actual performance, the civilian leaders will be judged incompetent by officers whose standards of excellence lie outside national boundaries and who see themselves as the real repository of their nation's values. The officer corps of developing countries although ambivalent in their own self-image, tend to share a self assurance as to their own capability in directing their country's affairs. Pye (1961) believes that because the day-to-day problems to which the military are confronted are more clearly structured and because the ranges of alternatives is narrower, the military will tend to overestimate its capacity to find solutions to their nations' problems.[10]

In Upper Volta and Dahomey, the military justified their interventions by referring to the apparent incapacity of the civilian governments to make decisions in situations of social conflict. Once in power, the officers usually announce a series of quick decisions so as to establish their reputation as men of action rather than thinkers. These decisions often appear to have little relevance to the immediate crisis situation. For example in The Central African Republic, on seizing power Colonel Bokassa issued five edicts aimed at setting up a new moral order: an obligation for all government officals to participate in weekly religious services; the abolition of polygamy; a limitation on early marriages for girls; an obligation for all government employees to act as examples of Central African virtue; and the prohibition of

tam-tam playing between sunrise and sunset, except on week-ends and holidays. In Upper Volta, the new military government immediately announced the suppression of fiscal privileges for ministers and civil servants, the suppression of television broadcasting and the closure of certain diplomatic missions abroad.

Along with ambivalence and self-assurance, a third characteristic of the ideology of military professionalism which has been linked with military intervention is the officers' distaste for politicians and partisan politics.[11] After seizing power in 1965, Colonel Soglo claimed that the Dahomean army had intervened to put an end to the political in-fighting of the civilian leaders which was ruining the country.[12] Political activity is often seen as a dubious necessity in which the army is forced to participate on a temporary basis. For example, in 1966 Colonel Afrifa announced that the Ghanian army "is not there to govern but instead to prepare the way for a lawfully representative Government of the People (Evening News, Sept. 1, 1966)." Similar declarations are so widespread that many observers have concluded that the military's animosity towards politics and politicians is an important motivation for intervention (Lusignan, 1969; Schneyder, 1965; Tixier, 1966).

Thus it is not only the organizational characteristics of the army's corporate infra-structure which is said to favour military intervention but also the ideological super-structure which accompanies it. According to military sociologists, ambivalence, self-assurance and hostility towards politics and politicians may all

support, if not actually motivate, the military's decision to intervene.

This brief survey has outlined the five characteristics of the military organization which may influence military interventions. Basically, military sociologists explain African military coups on the grounds that the African armies are strong, cohesive, nationalist and modern forces, and that their interventions come about through a desire to prevent politicians from drowning their countries in sterile political debates. Since the military is a modern organization, it feels it cannot allow the country to slip back into tribalism because of the corruption and indecision of politicians.

When applied to Africa this organizational explanation of military coups suffers from a number of obvious drawbacks to which we have already alluded. To begin with, it is based almost solely on "inferring what the consequences would be of transferring the organizational format of the military in western countries to transitional societies (Price, 1971b, p. 400)." Until we possess for African armies the kind of detailed information accumulated by Janowitz in The Professional Soldier (1960), it will remain impossible to test the validity of this organizational model for the African context.

Second, the organizational model fails to distinguish between the capabilities, incentives and causes of a military coup. Although a monopoly over the instruments of violence is a necessary prerequisite for efficiently staging a military coup, it does not constitute a sufficient reason for initiating such an operation.

Similarly, a high degree of discipline, a hierarchical structure and an efficient network of internal communication may facilitate the planning and execution of a coup but they do not cause such an intervention. Thus most factors which military sociologists associate with military interventions are at best probabilistic rather than causal statements.

Third, although Janowitz had emphasized their importance, most other military sociologists ignored the links existing between the military organization and its socio-political environment. One exception is Luckham's study of the Nigerian army (1969) where the activation of primordial commitments in the military and its subsequent decision to intervene in the political process is seen as a result of changes in the political environment. But even then, Luckham is more concerned with the immediate impact of the organizational variables than with their interaction with the environment.

Fourth, by focusing on organizational variables, military sociologists have been led to an exaggerated concern with the formal structures of military institutions. While military professionalism and bureaucratization may both be present in the American and Togolese armies, they are nevertheless present at a different level and in a radically different form. Finally, certain findings derived from the study of western armies do not seem to be verified in the case of all developing nations. For example Janowitz (1964) on the basis of his study of European, Asian and Latin American armies, has suggested that military intervention increases with its size and sophistication. But in studying Latin America, Putnam (1967) and Alexander

(1958) found no relationship between size and the propensity to intervene; nor did Gutteridge (1969) and Zolberg (1970) in examining Tropical Africa. Also Feit (1969) found the relationship to be a negative one.[13] Similarly it has been suggested that a high level of unity within the military establishment is conducive to coups (Levy, 1962; Pye, 1962a). Nevertheless Fossum (1967) and Putnam (1967) have found that Latin American military regimes are the targets of a larger share of military coups than civilian regimes, thus suggesting that divisions within the military can make a distinct and positive contribution to the number of coups d'état.[14]

Ultimately, the major contribution of the organizational model is that it forces an examination of the sociological variables most closely associated with those individuals and institutions which constitute the major protagonists in any military take-over. It assumes that institutions, like individuals, have a singularity of their own which guides their behaviour. The organizational model consistently accepts the existence of an entity known as either the "military" or the "officer corps" which is supposedly capable of evaluating judgement and rational behaviour.

Partly because of these shortcomings but also because of a different tradition of research, this sociological approach has come under criticism from political scientists concerned with the problems of development. Rejecting the organizational model they examine the political and socio-economic environment in which armies operate for an explanation of their intervention in politics. As a result their vision

of the military is profoundly modified. Far from appearing as an autonomous and privileged protagonist the military is now considered simply as one organization among many, whose role is mainly determined by the changes taking place in its specific socio-political environment.

The Developmental Approach to Military Coups in the States of Tropical Africa

One exponent of the developmental approach is Finer who in The Man on Horseback (1962), suggests that the military's propensity to intervene and the nature of this intervention are related to the level of political culture in a given nation and not to any organizational feature of its armed forces. According to his view, in a mature political culture where "the public involvement in and attachment to civil institutions is strong and widespread (Finer, 1962, p. 87)." military intervention tends to be limited to an attempt to influence the civilian authorities through legitimate channels. In those countries with a less highly developed political culture, where there is some question as to the legitimacy of the procedure to transfer political power, the military will resort to blackmail. Finally, in countries with an immature political culture, military intervention will either take the form of displacement, for example, the replacing of one leader with another, or of supplantement, replacing civilian control with a military regime.

Finer's approach has the merit of placing the military coup within its societal context. There are, however, a number of limitations inherent in his use of the concept of culture.[15] For one thing, the

concept includes too many variable components - legitimate leadership, viable mass organizations, an adaptable constitution and recognized procedures for the transfer of power - to be readily applicable. Secondly, as an explanatory variable "political culture" is almost useless. In non-crisis circumstances a well-developed political culture may restrain the military from intervening but when conflict threatens the very foundations of this politically mature society, as was the case in France in the 1950's, the military will be under heavy pressure to intervene to save this so-called mature society from total collapse. Thus a mature political culture does not at all mean that the military is unlikely to intervene but that it will intervene only when the stakes are higher. Finally, the link between a given level of political culture and certain types of military intervention are more tautological than causal. For example, Finer first defines a mature political culture as one which is not susceptible to extra legal forms of government change such as a military take-over. Yet he also concludes that the maturity of a political culture does inhibit military coups.

Huntington (1968) approaches the problem in a similar way by using the concept of politicization. Rejecting the attempts of sociologists to explain coups d'état through a study of the internal features of the military, he suggests examining military interventions as just one manifestation of a more basic phenomenon which affects all developing societies, namely the general politicization of all social forces and institutions.[16] Because of the absence in developing societies of

effective political institutions, specialized groups tend to become involved in politics and deal with general problems "not just issues which affect their own particular institutional interest (Huntington, 1968, p. 194." In such societies, where the political structures according to Huntington, lack autonomy, coherence, and adaptability, the military, like the trade unions and the student organizations, will inevitably become involved in politics as a "response to the escalation of social conflict by several groups and parties (Huntington, 1968, p. 211)." On the whole, Huntington believes that military coups tend to occur in those societies with a high level of political participations but with few effective political institutions which can cope with this increased participation and absorb its energy.

In the same vein, Lissak (1967) considers that most developing nations cannot maintain a balance within the various institutional sphere during the modernization process. The resulting crisis in legitimacy strengthens counter-elites such as trade unions and the Communist party which have long claimed political power, or brings to the surface new elites, such as the military which then act to protect their own corporate interests. Lerner (1960) and Robinson (1960) suggest that the Turkish military coup of 1960 was the result of such an imbalance in the levels of modernity reached by the civilian and the military sectors, the latter through its participation in NATO and American military assistance, had become more dynamic than the civilian leaders who were more interested in their regime's short-term survival than in exercising political leadership. This gap "tended to make the

army's programs dysfunctional" and as a result its "satisfactions turned into frustrations (Lerner, 1960, p. 41)." As a result, by 1960 a military coup had apparently become inevitable, in order to re-establish an equilibrium between the military and civilian sectors.

A number of other studies have tried to establish more limited causal links between selected aspects of the political environment and military intervention. Ozbudun (1966), looking at Turkey, and Alexander (1958), at Latin America, have stressed the importance of a stable and well-organized party system in limiting military coups d'état.[17] According to this view, not only will strong and effective political parties inhibit the military from intervening, they will also render such intervention unnecessary. As long as political parties are there to aggregate and articulate the political demands of the population and as long as they constitute an efficient vehicle for meeting these demands by implementing decisions, the political system will survive the revolution of rising expectations and successfully adapt to change.[18]

Political participation that is the level of citizen involvement in national politics and in the political activities of interest groups, constitutes a second component of the political environment which has often been associated with the occurrence of military coups. Finer (1962) and Johnson (1962) both suggest that increasing popular interest and participation in the political process decreases the likelihood of military intervention. Almond (1963), Black (1966), Hopkins (1969) and Rustow (1967) also believe that a high level of political partici-

pation constitutes the best safeguard against military intervention by making such intervention unnecessary and difficult to achieve.[19] These same authors also insist on an effective performance by the political leadership as an efficient deterrent to military coups. Almond (1963) and Apter (1971) believe that military coups occur when the nation's wealth and resources are not fairly distributed among the population. For Eisenstadt (1966) coups are the result of a sudden decrease in the governments' capacities to reach out and distribute public goods to the citizenry.

Criticizing Finer and Huntington as well as Lissak for their exclusive preoccupation with the political environment, Perlmutter (1969) suggests that military intervention is the result of both social and political conditions. Four social and political conditions are singled out: a low degree of social cohesion; the existence of fratricidal social classes; a non-consolidation of the middle-class; and a low level of recruitment and mobilization of resources as a result of the lack of common political symbols. These socio-political conditions in turn tend to cause a low level of political institutionalization and eventually encourage the military to intervene in the political process. Because neither ideologies nor political parties can unite the various elements of the body politic, a gap develops between the "center" and the "periphery".[20] This gap often degenerates into open social and political conflict which in turn contributes to military coups (Fitzgibbon, 1960; Roberts, 1958; Fossum, 1967).[21]

Other socio-economic factors have also been associated with military intervention. Economic growth, especially industrialization, has been said to diminish the likelihood of military coups (Alexander, 1958; Fossum, 1967). The rationale behind this theory is simple: as an economy develops, prosperity increases and in a prosperous economic climate social conflicts diminish as the general standard of living rises. This optimistic vision is challenged by Huntington (1968), Putnam (1967) and Hoselitz (1960) who suggest that a high rate of economic development which increases the population's expectations can in fact aggregate latent social conflicts, and will increase rather than decrease the likelihood of military intervention.

This developmental approach, first applied to the Latin American and Middle Eastern scene, has been applied to African military coups by several scholars. For example Lee believes that it is more important "to analyze the nature of the society involved (1969, p. 160)." than to make comparative speculations "on the basis of school background or sense of professionalism between different officer corps (p. 154)." Zolberg states that any understanding of the behaviour of African armies "must be firmly rooted in the understanding of the unique quality of these societies (1969, p. 201)." Gutteridge suggests that any sound explanation of African military coups is "likely to be as much concerned with the political behavior of the whole society as with that of the defence forces in particular (1969, p. 141)."

As in the case of the explanation offered by military sociologists this concern with socio-political environment has given rise to another

general explanation of African military coups, based on a theory of modernization and political development rather than military professionalism. According to this approach African societies are involved in an irreversible and accelerated process of modernization. This process involves a break with traditions since it imposes a high degree of social mobility and well-developed associational and occupational systems. Individuals are up-rooted, old values no longer make sense, while new values are still not firmly internalized so as to provide a guide for action. Urbanization, education and industrialization all create a climate of rising expectations with which neither the politicians nor the political system can cope. The outcome is often disequilibrium and uneven development for the various sectors of society, leading to individual frustration and tension. At this point the danger of systemic collapse is so great that the military will decide to intervene to prevent a further deterioration of the modernization process.

This standard explanation has received alternative formulation in the literature on African military coups. According to Lantier the military have taken over under pressure from the progressive and modern sectors of the population which grow tired of inefficiency and corruption:

> C'est sous la pression des forces populaires, décidées à mettre fin tant à la gabegie et à la corruption qu'à la crise économique et sociale que les militaires ont accepté de prendre provisoirement la direction des affaires courantes . . .

> les politiciens eux-mêmes, las d'un carrousel les plaçant tour à tour en prison et au pouvoir avaient été les premiers à la souhaiter (1967, p. 172).

Similarly Lusignan (1969) maintains that the African military, because of their special regard for efficiency and progress, have always felt obliged to answer the call of those "who stood for obedience, discipline, honesty and authority (p. 365)."

O'Connell attributes military coups not only to a clash of expectations and the resulting frustration but also to the quality of the political class since those who could have improved the quality of this class opt instead for "the public service . . . in order to replace expatriates and keep the administration machine running (O'Connell, 1967, p. 187)." According to this view, the skills of nationalist leaders in rallying support are of little use when applied to the problem of governing a country. The military prove better suited to this task and, according to O'Connell, their intervention should be seen as a sort of waiting-period until a new generation of politicians is developed. A somewhat similar view is expressed by Said who suggests that African armies have assumed political significance by default because the civilian authorities have "preferred facile ideological speculation to the wise allocation of social values, reconciliation of conflicting interests and performance of efficient administration (Said, 1968, p. 41)."

In the same vein Skurnik in his analysis of the Upper Voltan military coup of 1966, emphasizes the lack of political skills of President Yaméogo:

> Apart from political obtuseness, he seems to have lacked a fundamental sense of balance in his relations with others. For one thing, his channels of communication were so clogged up that he apparently ignored several signs of trouble brewing (1966, p. 7).

Hippolyte (1968) believes that the major cause of military intervention is not the inefficiency of the political leaders, but rather the global situation of under-development, for which no political leader, however dedicated and skilful he may be, can find an easy solution. A coup d'état he maintains is possible and almost inevitable when this under-development reaches the crisis stage:

> Un coup d'état semble possible là où la situation économique et sociale offre un terrain propice, là où il y a carence des autres forces organisées, là où l'armée est toute puissante ou seule puissante, là où l'opinion publique est contrainte ou tentée d'avaler l'entreprise des militaires, là où finalement les grandes puissances disposent de moyens d'action (1968, p. 48).

The most comprehensive formulation of this developmental approach is that of Zolberg (1968a, 1968b, 1969). He argues that in the immediate post-independance period the new political leaders gained additional prestige from the sudden creation of various new political offices and the expansion of state-directed economic activities. At first African politicians who could justify their claims to power because of their roles during the struggles for independence had no difficulties in putting together viable political coalitions by a

by a careful distribution of these new benefits. However, in time, distrust developed as the gap between the leaders' promises and their capacity to deliver became apparent. The politicians soon began to rely increasingly on force and coercion to remain in power with a resulting decline in the value of political bargaining and a corresponding rise in that of the police and the army.

According to Zolberg the politicians' increased reliance on force was a useful initiation for the armed forces who were responsible for its implementation. The military "learned how much weaker were the African rulers than their predecessors (Zolberg, 1968a, p. 81)." They also learned that "control over even a small, ill-equipped, poorly trained body of men was crucial (1968a, p. 81)." They lost respect for the political leaders and began to question their legitimacy. At the same time, the politicians became less and less adept at "discriminating the real danger signals (Zolberg, 1969, p. 443)," and tended to use all their reserves of force to put down minor civil disorders.

According to Zolberg, this increased reliance on force affects all African politics and therefore military interventions are likely "to occur anywhere in the region" so that it is "impossible to specify variables which distinguish as a class countries where coups have occurred from others (1968a, p. 72)." Whether or not the armed forces of a given country intervene at a particular time is simply related "to highly specific and circumstantial features of that country's current political situation (Zolberg, 1968a, p. 72)."

and not to any specific corporate variables. Zolberg sees African armies as no different from other social institutions:

> African armies share the structural characteristics of other institutions. The solidarity of their leadership, the control they have over their own organizations, and the degree of leverage they can exert over the society are not likely to be much greater than what existed in the government they replaced (1969, p. 444).

According to this interpretation, African armies are certainly not the organizational ideal types described by Pye (1962a) or Levy (1962).

Like Zolberg, Welch sees the political and socio-economic environment as the basic cause of military interventions but offers no integrated theory as to their origin. The events leading to African military coups are so complex that they defy causal analysis:

> Many political systems were involved, each with distinct heritages and problems. To assume that 'popular discontent' or 'economic stagnation' or 'neo-colonialist interference' brought about the coups d'état does not do justice to the unique combinations of circumstances. Rather than search for a sole cause, we must examine a series of factors, the salience of whose components differs from one African state to another (1970, p. 17).

He does suggest five factors which are related in some way to military intervention but does not specify the nature of the causal link or any of the antecent inter-relationships. These five factors all involve a partial breakdown of the political and socio-economic development process: a decline in the prestige of the major political party; an incapacity of the political leaders to adapt themselves to changing political realities; internal social conflicts; economic difficulties; and the corruption and inefficiency of the political leaders.

A number of authors have criticized Zolberg and Welch for being too limited in their approach to African military coups. They contend that the phenonmenon cannot be understood only in terms of the political and socio-economic environment of the nation-state in which a coup occurs, but that the continental and international situation must also be taken into account. For example Gonidec (1969) and Corpierre (1966) suggest that the colonial system has so "synchronized" Africa that a coup in one country is quickly imitated in the neighbouring countries. Mazrui calls this process "the inter-territorial demonstration effect", that is, "a capacity to see each other as relevant examples which varied in proportion to the degree of transnational integration between specific African States (1969b, pp. 94-5)."

Other authors suggest that African military coups are not the result of internal factors, or of a contagious effect but conspiracies by foreign governments; thus Ikoko (1970) holds western capitalism and the British government are directly responsible for the 1966 Ghanian coup. His evidence is limited to the presence in Ghana of a West-German journalist working for the Confédération Internationale des Syndicats Libres, a Europe-based trade-union association, and to the British government's insistence that President N'Krumah travel to North Vietnam. Yet, Lewis (1966) holds the American C.I.A. responsible for the same coup. His evidence is a rapid increase in the staff of the American embassy and to the sudden departure, immediatly after the coup, of an information officer from the same embassy.[22]

Marxist scholars offer more theoretical interpretations of the role of international factors in African military coups. A recurrent theme in the Marxist view is to see African military coups within the framework of the international capitalist system and its relations with the dependent states at the periphery. In a challenging article Murray (1966) suggests that ideological divisions in the Communist camp and the inner dynamics of advanced capitalism have rendered colonialism inefficient and outmoded as an instrument of control over primary producers. He points out that the military coup is less costly and less flagrantly imperialist than the old system of colonial administrators. Lachenal (1966) sees military coups as reactionary enterprizes carried out to prevent more progressive forces from seizing political power. He believes Colonel Lamizawa of Upper Volta took over from President Yaméogo to prevent the striking trade unions from claiming political control for themselves. In the Congo-Kinshasa General Mobutu presumably stepped in when it became clear that President Kasa-Vubu, no longer content to be a tool of capitalist governments, was relying increasingly on the progressive forces within the country, including the rebel forces.[23] For Lachenal, military coups are simply a continuation of imperialism by other means:

> On a aujourd'hui, cet impérialisme qui n'a pas changé de nature, mais doit tenir compte d'une situation nouvelle, s'efforce sous d'autres formes de poursuivre sa politique de brigandage au lieu de s'employer à réparer le mal qu'il a fait. Les chaînes sont moins visibles, le résultat est le même (1966, p. 81).

The empirical evidence for interpreting African military coups as instruments of neo-colonialism is contradictory. For example, in Congo-Brazzaville and Burundi, the military regimes have both adopted more progressive attitudes than the civilian regimes they replaced. Also military coups have taken place both in countries which have attempted to free themselves from neo-colonialism (Ghana and Mali) and in countries with very close relations with their former colonial rulers (Gabon and Upper Volta).

As is clear from this brief survey of the developmental approach the one common theme which unites all these widely divergent explanations of African military coups is the impact of modernization on African society. They all see Africa as being caught in the turmoil of political and socio-economic development. As African countries develop economically and reach new levels of collective welfare, an increasing number of citizens become interested in national politics. These desires for increased political participation often cannot be channelled by the existing political institutions, notably the political parties, which have often grown inefficient when confronted with the realities of nation-building. As a result of this inability, social conflicts are exacerbated and threaten to engulf the entire social system. The intervention of the armed forces, often at the request of the civilian leaders themselves, is simply the final step in this process.

From this perspective the modernity or non-modernity of the African military organization is of little importance. When society is threatened by general breakdown, if a military institution exists at all, it acquires de facto political importance as Bienen suggests:

> No matter the degree of professionalization within the officer corps, the level of technology, the organizational format of a particular military force, an army in Africa is always a potential political factor because it can exert some strength in what is essentially a domestic power vacuum (1968, p. 37).

Therefore there is actually little validity to the hypothesis suggested by military sociologists of a causal relationship between the existence of a modern professional force and the occurence of African military coups. Such a relationship, they contend, is a spurious one. The real causes of military interventions are to be found beyond organizational characteristics.

The developmental approach, like the organizational approach discussed above, involves several conceptual distortions. First, it is preoccupied with the most overt and dramatic form of political intervention by the military, the coup d'état. But coups, are only one type of military intervention. For example, in both Gabon and Chad which have experienced no such overt military intervention, there is still a high level of covert military involvement in the political process. By focussing solely on the coup, observers like Hippolyte (1968) and Lantier (1969) confuse the immediate events leading up to the coup with the causes of military intervention.

Second, the view that coups are an indication of a temporary breakdown in the process of political development has led to circular

reasoning. A military coup, by definition, always involves an abrupt modification in the existing political arrangements. Therefore a coup cannot at the same time be considered as a result of a societal breakdown and be defined as the cause or the symptom of such a breakdown.

Third, according to the developmental approach, coups are often seen as an epiphenomenon brought about solely by environmental factors, either a breakdown in the modernization process or the operation of the international economic system. For example, the idea that African military coups have occurred because of a what is called an "inevitable" crisis in political leadership (Said, 1968), contributes little to an understanding of why a coup has occurred in Ghana and not in Guinea.[24]

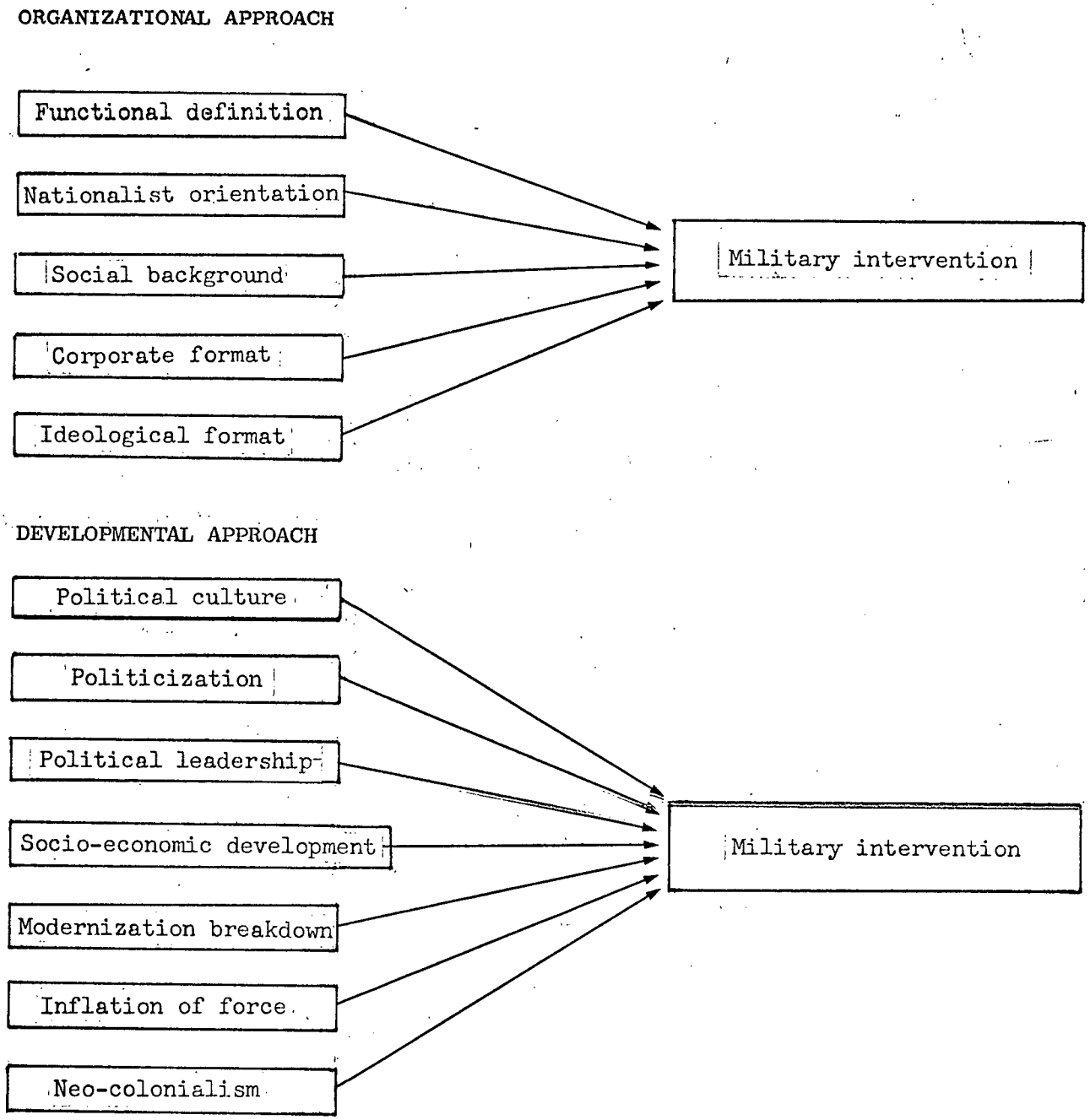
Fourth, although the developmental approach recognizes the influence of the socio-economic and political environment in any explanation of African military coups, it still fails to establish clear causal links as to which processes in this environment affect the military's decision to intervene. The developmental approach only recognizes that coups are part of the development process and occur in situations where this process has broken down or is under serious strains as a result of internal imbalances. It does not identify the causal paths which links the various dimensions of this environment with the military's decision to intervene. For example, why should the military intervene in those countries where, as Huntington maintains, the level of political institutionalization is low, when in fact one of the first gestures of most military regimes is usually to abolish political parties and dismiss the elected representatives? Unless the specific

impact of changes in the political and socio-economic environment on the internal features and the institutional posture of the military organization is taken into account, it is impossible to identify precise causal links between the developmental process and military coups.

Finally, there is also little empirical evidence for the view that African armies intervene to prevent social collapse. In the Sierra Leone coup of 1968, the military intervened to prevent the peaceful transfer of political power following a valid national election.[25] This intervention, far from establishing an era of political stability, was followed by two additional military coups as a result of internal military rivalries. There are also repeated examples where the army failed or refused to seize power in spite of imminent violent conflict but without any systemic collapse resulting from such non-intervention. In 1964 a successful coup in Gabon was crushed at the last moment by the arrival of French paratroopers without any catastrophic consequence for the country.[26] On November 21, 1966 the Togolese political and social environment exhibited many of the conditions usually associated with military coups: an unstable and confused political situation marked simultaneously by the resignation of two Cabinet ministers, an attempt by President Grunitzky to fire his entire Cabinet, the forced resignation of the Minister of Labour and the rift between the President and Vice-President Meatchi; the revival of latent tribal rivalries with the return of Kutuklui, heir apparent to former President Olympyio; the seizure of the national radio station by a group of mutinous soldiers;

FIGURE I

THE ORGANIZATIONAL AND DEVELOPMENTAL APPROACHES OF MILITARY INTERVENTION



and a protest march of 5,000 Togolese and the threat of further violent political manifestations. Nevertheless the army chose not to intervene and the immediate political crisis was resolved without a general collapse of civil order.

Until the main variables associated with the developmental model of African military coups -- economic development, social mobilization, political institutionalization -- are empirically tested it will remain impossible to ascertain the validity of the explanation suggested.[27]

As we said at the beginning, the purpose of this review of the literature was not to arrive at an exhaustive summary of the explanations of military coups in Africa, but to illustrate that most explanations follow one of two basic approaches to African military coups: the organizational approach which stresses the internal characteristics of the military organization as the cause of coups, or the developmental approach which stresses the impact of modernization and development on all African societies. Figure 1 summarizes the major causal relationships suggested by the two approaches and reveals that the organizational and the developmental approaches make use of the same factors but in a different causal sequence.

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In the end the major criticism levelled at both the organizational and developmental approaches are surprisingly similar. First, in both cases there is an absence of empirical evidence. Models tend to be transposed from military and development literature without any extensive consideration if they are applicable to the realities of African armies and African military coups. Except for the studies by Luckham (1969) and Miners (1971) there are no detailed sociological analyses of the African military than that of Nigeria. No cross-national study has tested the hypothesis of a link between corporate characteristics of African armies and their propensity to intervene. Nor has there been any cross-national empirical study aimed at testing the existence of a causal link between selected features of the African socio-political environment and their impact on a country's likelihood of undergoing a military coup.

Both give a rather static and deterministic view of African military coups. African armies are depicted as pre-determined to intervene in the political process, either because of certain internal organizational features or because of a political climate which encourages such intervention. Rarely is the interaction between the organizational and environmental factors taken into consideration. Students of African military coups have paid too little attention to the historical antecedent of African military organizations. The latter are usually taken as facts whose role is that of independent variables. This neglect of history and empirical scrutiny has led many scholars to accept a

distorted view of African armies and of their reasons for intervention. In both approaches, although this is more evident in the case of sociologists, African armies are seen as modern, strong and cohesive forces drawn into the political arena either because of their organizational superiority in the face of threatening civil chaos or because of the pull of a development process which ultimately politicizes all social groups.

To meet these criticisms, we will attempt to incorporate elements from both the organizational and the developmental approaches, since it seems reasonable to assume that African military coups are in some way linked to the specific characteristics of African armies and the socio-political context in which they operate. Our own approach is to suggest that in the case of Africa, the problem of military intervention in politics is in fact made up of two distinct, although closely related questions. First, there is the question of the existence of military coups as such. "Why have African military organizations, which were modelled along the lines of European professional armies, suddenly decided to abandon their role of servant of the state to intervene directly in the political process?" This is the question which military sociologists have attempted to answer by stressing the organizational characteristics of African armies. Our concern here will be with the process of military intervention and with those factors which lead the military to decide to intervene and which enable it to implement this decision.

There is also another dimension to the phenomenon of military intervention in Tropical Africa, that of its increased occurence since 1965. Not unlike those who share in the developmental approach we see the 26 successful military coups which have occurred in Africa since 1960 not as a succession of individual events which can be explained through the characteristics of the actors involved but as social facts whose repeated and generalized occurence can best be explained from the perspective of the more global social system.

Thus at the core of our approach is the belief that the process and the level of military intervention are two separate questions which both call for a different research procedure. In the next chapter, we present an analytical grid which differentiates between the organizational and institutional role of the military. This differentiation allows for the reconstruction of the process leading to the military's decision to intervene and for the empirical testing of those socio-political factors which can best explain the level of military intervention existing in the various African countries.

In Part II, an attempt will be made to apply this grid to a study of the development of African military organizations over an 80 years period. The objective in this section will not be so much to identify all the possible causes of military coups as to reconstruct the historical process which leads the military to their decision to intervene politically.

In Part III we attempt to verify the empirical validity of a set of propositions derived from the literature reviewed in this chapter and which attempt to explain the level of military intervention in the states of Tropical Africa.

NOTES AND REFERENCES TO CHAPTER I

1. Gutteridge expresses a similar view when he cautions against attributing long-range causes to African military coups: "the fact that the military coups in question have had little impact on the fundamental economic and social structure of those states indicates that they are not . . . to any degree an expression of the deprivation of any sections of society in basic terms (1969, p. 150)."

2. Colonel Sekou Traoré, in L'Essor, Jan., 5, 1968. General Mobutu also described the Congolese army as "le creuset du nationalisme congolais (La Voix de L'Armée Nationale Congolaise, June 15, 1966)."

3. For a critique of Nun's theory, see Vandycke (1971). Mosca was the first to suggest that the integration of the officer corps within the ruling class was a necessary condition of their subordination to the civilian authorities. This hypothesis was further developed by Andreski (1961).

4. Lantier (1967) has asserted that unlike Latin American armies the military establishments of Africa had no specific class component.

5. To date such statistics are only available for the Nigerian army.

6. This acculturation process is also seen as providing the recruits with their first opportunity of systematically advancing themselves and with their first training in citizenship (Pye, 1967, p. 84).

7. According to Lissek (1967) the army is the only institution capable of quick decisions and of enforcing law-and-order.

8. This technological superiority of the army in a society "hungry" for technology is also suggested by Lissak (1967).

9. This vision of the African army follows closely the self-image of the military. For example, the Upper Voltan army is described by its commander, Colonel Lamizana, as a prototype of the modern organization: "L'Armée est disciplinée, l'armée est solidement structurée, elle ignore les régionalismes, elle a le sens des responsabilités et la notion du Devoir (Afrique, 53 March (1966), p. 15)." In the Congo Kinshasa, General Mobutu considered the army as "la seule force disciplinée, la seule autorité aux principes moraux inébranlables, la seule institution nationale qui ait fait les preuves de son intégrité morale et de son efficacité dans son rôle de diffuseur des intérêts généraux (Mobutu, 1966, p. 33)."

10. According to Shils (1962) "if the civilian political elite is self-confident and forceful the military will be less inclined to intrude into the civil sphere (1962, p.40)" than if they appear demoralized or bewildered. Janowitz sees this self-assurance as "a defence against doubt and lack of self-esteem (1960, p. 230)."

11. This repugnance for politicians is most forcefully expressed by Gamel Nasser: "Every leader we came to wanted to assassinate his rival. Every idea we found aimed at the destruction of another . . . Personal and persistent selfishness was the rule of the day. The word 'I' was on every tongue. It was the magic solution of every difficulty and the effective cure for every malady (Nasser, 1959, pp. 33-4)."

12. "Considérant qu'après deux ans, ces responsables politiques par des luttes d'influence néfastes aux intérêts supérieurs du Dahomey, ont démontré leur incapacité de conduire le pays vers des lendemains meilleurs" (Colonel Soglo, Afrique Nouvelle, Jan. 5, 1966)."

13 Putnam found a strong positive correlation between the size of the Latin American military budget and the tendency to intervene. Fossum (1968) has explained this correlation by the fact that low military budgets pushes younger officers to stage military coups.

14. There is also confusion as to the exact nature of the link between military professionalism and military coups. According to Sayeed (1968) and Pye (1962a) the Pakistani and Burmese armies have been led to political intervention because of their high degree of professionalism. On the other hand, Fossum (1968) and Johnson (1964) have suggested that professionalism is not related to the military's tendency to intervene but that it simply modifies the style of the political interventions. Thus professionalism often means less violence in the execution of the coup and more reliance on a military junta as a privileged form of military government. Finally Huntington (1968) suggests that military professionalism will decrease the tendency to intervene.

15. The following discussion is based on Luckham (1969).

16. "The effort to answer the question: 'What characteristics of the military establishment of a new nation facilitate its involvement in domestic politics?' is misdirected because the most important causes of military intervention in politics are not military but political and reflect not the social and organizational characteristics of the military but the political and institutional structure of the society (Huntington 1968, p. 194)." A similar approach is shared by Needler who states that it is scientifically more rewarding to explain coups d'état "functionally rather than genetically, in terms of factors external to the military rather than in internal characteristics of the military establishment (Needler, 1968, p.60)."

17. The importance of political party institutionalization in the political development process has been a recurrent theme of the development literature. Olsen (1968) mentions a strong party organization as a determinant of development. Similarly Black (1966), Cutright (1965), Hopkins (1969), Pye (1966) and Ranis (1969), all insist on the existence of specialized and differentiated political institutions, including political parties, as pre-conditions of a dynamic and balance development process. For a cross-national survey of the role of political parties in political development, see LaPalombara (1967) and Weiner (1967).

18. In his empirical study of Latin American militarism Putnam (1967) finds that interest aggregation by political parties and party stability were strongly and negatively correlated with military coups. However, interest articulation by parties and groups did not inhibit or encourage military intervention. Putnam's findings partly confirm Snow's (1966) hypothesis that interest aggregation by political parties is a more important pre-condition of political development than interest articulation.

19. In the case of political participation, Putnam (1969) shows that it is not correlated positively or negatively with military coups. On the importance of political participation on the development process see Lerner (1958), Saicedo (1968), Scalapino (1968) and Steiner (1968).

20. This dichotomy between "center" and "periphery" was first used by Shils (1962).

21. The link between social conflicts and military intervention is also suggested by Germani (1961), Liewen (1962) and Needler (1963). But Putnam (1967) finds no empirical link between domestic violence and military coups in Latin America.

22. In almost every African military coup a foreign conspiracy has been suggested: the French have been held responsible for the Malian coup of 1968 (Murray, 1966); President Houphouet-Boiny of the Ivory Coast for the 1966 coups in Upper Volta and the Central African Republic (Murray, 1966); and President N'Krumah for the first Nigerian coup and for the 1967 Sierra Leone coup (Barrows, 1968).

23. Throughout this study the name Congo-Kinshasa is used rather than Zaire.

24. This view of military coups as inevitable and automatic is well expressed by Young (1969).

25. On the events surrounding the Sierra Leone coup of 1968, see Barrows (1968) and Cartwright (1968).

26. On the Gabon attempted coup <u>see</u> Gabon (1964, 1968).

27. There are only two empirical and cross-national studies of African military coups (Dacks, 1968; Mapp, 1970) both unpublished. Both are unfortunately hampered by methodological problems which limit their usefulness. Studies concerned with the role of the military in developing areas have tended to by-pass Africa because "of the well-known statistical effect of artificially inflated relationships when a large number of cases cluster at one or both ends of the regression line (Cutwright, 1963, p. 255).

CHAPTER II

THE MILITARY AND ITS ENVIRONMENT: A FRAMEWORK FOR ANALYSIS

The basis for this framework is to conceptualize the military in a dual manner: first, as an open system continuously interacting with its environment and second, as a social institution participating in the power structure of the society. My aim is to show that military coups occur when transformations in the political and socio-economic environment modify the exchange process between a military organization and other sectors of the social system. As a result of these transformations, the military may be forced to modify its institutional role, notably by resorting to a coup in order to restore the stability of its exchange process with the environment. In addition, the framework suggests that the level of military intervention existing in a given country will depend on the nature and the intensity of the environmental changes taking place in the economic, social and political sectors.

The Military Organization as an Open System and an Institution

It is only recently that the military has been studied from the perspectives of organizational and institutional analysis.[1] Social scientists were originally most concerned with the characteristics and motivations of recruits. This orientation was predominant in the research conducted up to World War II when Stouffer's massive study of American soldiers led to the conclusion that the concepts of

morale, attitudes and motivation were too limited to allow a full understanding of combat behaviour.

> We are forced to the conclusion that personal motives and relationships are not uniquely determinate for organization in combat. . . . Officers and men must be motivated to make the organization work, but not all of them have to be so motivated. . . . To put it another way, the best single predictor of combat behaviour is the simple fact of the institutionalized role: knowing that a man is a soldier rather tnan a civilian. The soldier role is a vehicle for getting the man into the position in which he has to fight or take the institutionally sanctioned consequences (Stouffer, 1949, p. 101).

Stouffer goes on to suggest that military sociologists apply the concept of organization to the study of members of the armed forces. This concept of organization was not new to the social sciences, but since Weber's work (1957) organizations have been defined principally in terms of the pursuit of an "activity that must be continuously and consciously coordinated (Perrow, 1969, p. 167)." As a result organization theory has been concerned principally with the formal anatomy of organizations, that is the structural arrangements which facilitate the pursuit of this activity.[2]

This structural approach has been successful in delineating some of the major aspects of the internal functioning of an organization, for example the interactions between formal and informal channels of communication or the patterns of bureaucratic control. But by neglecting the economic, social and political environment in which organizations operate, it may have distorted our understanding of a phenomenon such as organizational growth. For example, the

success of an organization has traditionally been credited to the quality of its executive, the efficiency of its managerial control and the extent of its communication network. In fact, the success of an organization is often simply the result of a particularly favourable environment (Dill, 1960). A firm which enjoys a monopoly in the production and distribution of a commodity in high demand is less dependent for its growth on finding the most efficient and effective ways of manufacturing its product than one which competes in an active and open market. It can afford a certain degree of flexibility and still remains profitable.

In this study, rather than focusing on formal characteristics such as bureaucracies and communication networks, an organization will be defined as a goal-oriented system interacting with its environment through an exchange relationship.

Organizations, including military organizations, tend to be goal-oriented. They are usually set up for the purpose of reaching some specific goals and most of their activities are connected in one way or another with meeting these goals. Etzioni (1964) points out that goals provide an organization with its orientation by depicting a future state of affairs. Specific goals also establish guidelines for the operation of the organization and provide observers with some criteria by which to judge the effectiveness of the organization. The existence of goals also provides the organization with legitimacy. As Parsons (1970) suggests, an organization, by striving to attain its goals, also performs a set of different functions for the larger

social system. For example, the production of doctorates may constitute one of the immediate goals of a university, but from the perspective of the overall social system the attainment of this goal also contributes to the production and reinforcement of cultural norms.[3] The legitimacy of an organization's goals, although taken for granted by most organizations, is in fact conditional on the coincidence of these goals with a societal function. When this legitimacy is threatened the organization itself is in danger. In the case of business organizations, market mechanisms, by creating a demand for the organization's product, automatically provide this legitimacy. But an organization (such as the tobacco industry) may still have to invest time and energy convincing the rest of society of the legitimacy of its product.

Goals and legitimacy are not inherent to an organization. Few organizations have their own existence as their major goal or as the major source of their legitimacy. An organization's goals are usually located outside the organization, in some need of the overall social system. This "outside" is the organization's environment.

The environment has not been completely ignored even by organization theorists concerned mainly with formal and bureaucratic structures. Weber (1957, 1958) has suggested that the emergence of capitalist and bureaucratic forms of economic organization is linked to three transformations taking place in the social environment: the rise of the Protestant ethic, the generalization of the money economy and the consolidation of the nation state. However, a majority of organization studies, particularly Schumpeter (1950) and Simon (1958)

see the environment as an "out there". For many observers, it serves as a catch-all category for any important but indeterminate factors not immediately connected with the formal structure of the organization. Even Von Bertalanffy (1956), a pioneer of systems analysis and its application to the study of organizations, did not foresee that processes taking place in the environment could themselves effect conditions of exchange within the system.[4]

In this study it will be assumed that the environment is not merely a residual category or a "gigantic container (translated from Sales, 1970, p. 112)" in which an organization floats, but a concrete and differentiated milieu animated by its own internal dynamics.[5] The complexity and dynamism of this environment have a direct bearing on all aspects of an organization's life. Seen in this perspective, any organization, including the military, can best be described as an "open system" where the behaviour of the various components is interrelated and where the system as a whole exists by virtue of a "transaction or transposition of energy or materials across its boundaries to and from the environment (Hutton, 1969, p. 31)."

This transaction or exchange process involves two distinct operations.[6] First, every organization in the course of reaching for its goals "produces an identifiable something which can be utilized in some way by another system (Parsons: 1970, p. 17)."[7] This "identifiable something" or output may take different forms: material goods in the case of an economic enterprise, regulatory decisions in

the case of a government agency or intellectual goods in the case of a cultural organization. However, in all cases something is produced whose absence would modify the behaviour of some other organizations and would eventually affect the state of the global system.

Second, the organization, in order to produce this "identifiable something", needs to mobilize and transform resources acquired from the environment. In other words, it needs an input. These resources are of two types: material such as land, labour and capital and non-material such as knowledge, legitimacy and support. The fact that both types of resources are limited places the organization in a competitive situation with other organizations which need these resources for their own input. Should either the input or output of an organization be modified by an outside force, its goals and internal configuration as well as its position within the environment will be modified.

This concept of the organization as an open system interacting with its environment can also be applied to the military. However, the military, because of the special nature of its goal, that of finding the most efficient way of maximizing the potential or actual use of force, is in a somewhat different position than other organizations with which it has to compete for resources.

Contrary to a business enterprise, individuals rarely join together for the purpose of establishing an army. Nor are military establishments created through an ad hoc process. Increasingly,

modern military establishments have become the conscious and exclusive creation of the modern nation state which also claims exclusive jurisdiction over its use. Thus the raison d'être of the military organization is defined from outside the organization itself, usually by the government. As part of its task the military can be called upon to inflict death on individuals and damage to other organizations. This possibility also sets the military apart from civilian organizations. In the contemporary world the use of military force is at best considered a necessary evil, forced upon nations by conditions within the international system. Few other organizations operate in what Parsons (1970, p. 48), defines as an "ethically ambivalent" atmosphere.

The "identifiable something" produced by the military is not like the automobile for the automobile manufacturer or education for the university. Armies are organized for the purpose of winning wars but they are not always at war. In fact when a war breaks out it is often assumed that the military has failed in its task of "producing" security. Because its product is not easily measured and is often defined in purely negative terms (security being the absence of war) the military organization has to live with a permanent question as to its utility, especially in time of peace. Yet, at the same time the survival of the entire social system may depend on the extent to which the military meets its goal and produces security. Few other organizations have such a vital role. No other organization, even other security-oriented organizations such as the police, functions in a similar context where there is a permanent threat to the survival of

its individual members. In no organization is the possibility of loosing one's life so central to the role of the organization. In fact this possibility is so important that it is the object of detailed planning and preparation at all levels of the organization.

Because of the special nature of its ethical basis and its goals, the military is easily transformed into a multi-purpose organization formally set up both to prevent and to stage war against rival military establishments. An army can also be used in such disparate tasks as assisting the police in directing traffic or helping maintain civil order; it can also serve as a ready supply of skilled and unskilled manpower to be used in a variety of civilian-oriented tasks.

Many features of the internal organization of the military are the result of all these special characteristics. A rigid and hierarchical internal stratification, a high level of discipline, an extensive network of internal communications and an authoritarian distribution of power and status are all the result of the military's orientation to danger and violence.[8] It should be stressed that these features are not the result of a conscious decision or choice by the military organization itself but are imposed on it by the nature of its goal. If the military is to survive as an organization dedicated to the maximization of the potential or actual use of force it must have a high level of discipline and a good network of communications. This imposition of certain organizational features determines in part the nature of the exchange process existing between the military

organization and its environment.

First, an army requires a great many resources, both material and non-material, to carry out its task. Its organizational survival and indeed the survival of the entire social system may depend on the quantity and quality of its equipment. Because it is impossible to predict when it will be needed, an army, if it is to be useful at all, has to be maintained at a high level of readiness, making its financial support a heavy burden for the state.

Second, an army will tend to look to its eventual opponents for guidelines as to the quantity of resources it will need and the most efficient way of transforming these resources. For example, interception fighter planes are only necessary if the potential enemy possesses an air force. The military continually has to adjust its needs according to its evaluation of the capabilities and intentions of its opponents, and to balance these against the capabilities and requirements of its client, the state.

Third, while it requires a great many resources, the military can count on only one source, the state, to provide it with its most necessary resource financial support. Unlike a business firm, an army generates little or no income to insure it against sudden withdrawal of financial support. Because of the potentially catastrophic consequences of failing to support their army, governments are usually willing to allocate large amounts of money to it. Still, the size of this support is matched only by its precariousness and its remoteness from the military itself.

In terms of its legitimacy the military is also entirely dependent on the state. The military organization cannot generate its own legitimacy because of its ethically ambivalent nature; it must depend on the state's legitimacy. This second-hand legitimacy offers its only justification for its monopoly of a large share of the nation's financial resources.

Thus, in terms of goals, legitimacy and internal functioning, the military is not an organization like others. Its goal is crucial for the survival of the overall social system, but it is also ethically ambivalent and a potential menace for society itself. Its legitimacy is second hand but it guarantees the state's own legitimacy. It exhibits a high level of coherence, rationality and efficiency in its internal functioning but it can easily be disturbed by outside factors. In fact the position of the military organization in relation to its political environment is highly paradoxical. On the one hand the military constitutes the supreme guarantee of the state's survival, but on the other hand it is entirely dependent on financial support from the state for its own continued existence. The army normally ensures the state's survival but cannot insure its own, since its goals, legitimacy and resources have to come from outside. There is an obvious discrepancy between the importance of the output of a military organization and the uncertainty of the resources with which society provides it.

However, any organization, especially the military, is not only an open system at the mercy of its environment, it can also

influence that environment. According to Touraine (1969), an organization should not be defined exclusively by its exchange relationship with its environment, but also by its active penetration of the political system.[9] Organizations such as the military are not only concerned with the most efficient and effective way of producing an "identifiable something" but also constitute key elements in the overall structure of economic and political power. According to Touraine, the organization

> participe au système du pouvoir économique et par conséquent interprète les orientations culturelles d'une société en fonction des intérêts de la classe dominante. L'entreprise a un pouvoir et cherche à imposer en elle et hors d'elle des conduites sociales et culturelles conformes à ses interêts de classe (Touraine, 1969, p. 254).[10]

As organizations, the firm, the university or the military, are vulnerable to changes in their environment. But as a social institution, they help shape this environment by participating in its struggles and its conflicts. The institutional importance of an organization is partly determined by its importance for the maintenance of the overall social system, and partly by its usefulness to those groups and classes competing for political control of this system.

As the institutional importance of an organization within society increases, a distinction between its internal administrative management and its institutional management emerges. The internal managers on the one hand, are concerned with an effective and efficient mobilization of resources to meet the organization's goals. Their preoccupation is with the internal workings of the organization.

The institutional leaders, on the other hand, are mainly concerned with the role played by the organization in the political and socio-economic environment. Under their leadership the organization becomes a political agent in its own right.

This institutional vision of the organization stresses the "political" rather than the "managerial" dimension of the organization.[11] But the two are never completely disassociated. The fact that organizations are also institutions not only involves them in outside conflicts, it can also introduce conflicts within an organization itself. Eventually the institutional role of an organization may come to threaten the corporate survival of the organization, for example, when a business enterprise or a university is associated with the unpopular side in a political controversy. The major responsibility of the institutional leaders is to prevent such misjudgements while using the institutional weight of the organization to protect or even increase its share of input resources.

As an institution, the role of the military is a crucial one. Unlike a business firm, the military is not only one element in the grid of economic and political power but also the umbrella under which this grid is developed and maintained by the groups and classes who benefit from it. In Poulantzas' terminology (1969) the army is the most important of all the "appareils d'état". The army is never a neutral and benevolent spectator of the exercise of political and economic power. In fact political life or what Easton (1965) calls the "authoritative allocation of values", always takes place in the shadow of the army's presence. Because it exists and because it is

a multi-purpose organization, the military can be used by those groups which control the allocative process. This possibility alone makes the army a vital institution.

The fact that the military is perhaps the most vital of all social institutions only accentuates a paradox mentioned earlier. As an organization, the military is more dependent for its input on its environment than a business firm or a sports club. It cannot itself generate the legitimacy and resources needed to achieve its goal. However, an army can always make use of its institutional weight to redefine or increase this input from the environment while a sports club cannot. Because of its importance as an institution, the military organization benefits from a range of possibilities not normally available to other organizations which are less vital as institutions. The military coup is one such possibility. These possibilities compensate for its dependency on the environment for financial resources and legitimacy. Furthermore, the military institution, because of some of its organizational features (esprit de corps, discipline and communications), can easily transform its institutional weight into effective action to modify its environment at will.

This organization-institution perspective suggest that the relationship existing between the military and its environment is not as simple and one-sided as the organizational and developmental approaches discussed in Chapter II would indicate. The military is neither an all powerful organization, completely isolated from the

rest of society, but which intervenes in the political process to save society from a total breakdown; nor is it only an agent of those political and social forces which shape this environment in such a way as to make military intervention inevitable. Both aspects are present and both contribute to the complexity of the relationship between the military and its environment.

Military Intervention as an Institutional Response

The organization-environment exchange relationship, like all exchange relationships, is highly unstable. The goals of an organization can easily be affected by forces outside of the organization. For example, the discovery of a new medical cure can deprive a volunteer organization of its raison d'être.[12] Similarly, the decision of a government to finance new social services can have an immediate impact on organizations which have previously provided these services. In some cases such environmental changes may lead to the disappearance of the organization, but in most cases the vested interests in maintaining an existing organization are so strong that new goals will be devised to give the organization a reason for continuing to exist.

Changes in the environment can also affect the internal functioning of an organization. Because of a new technological development or because of changes in the political arena, an organization may be forced to rearrange its internal functioning if it is to preserve its legitimacy. This is especially true in the case of business

firms which continuously have to accept new regulations as to the remuneration and working conditions of their personnel. Failure to comply with these rules may bring a withdrawal of legitimacy or of human and material resources necessary for the functioning of the organization.

When confronted with changes which can affect the stability of its transaction process with the environment, an organization must adopt a strategy which allows not only for its continued existence but also for the preservation of its autonomy. Thompson and McEwen (1958) suggest that the first task of every organization should be to recognize environmental changes accurately and quickly enough to allow time for the formulation and implementation of an adaptive strategy. The next task should be to evaluate the external support on which the organization can count to implement this strategy. Other organizations operating in the same environment constitute one possible source of external support.[13] In some cases, the government, in its legislative capacity, offers another source of support. Bargaining for an alliance with other organizations is often preferable to open competition as a strategy.

Before contracting any such alliances, an organization must make sure that by increasing its reliance on other organizations, it will not decrease its own margin of autonomy. Another possible

strategy is to modify the organization's goals, to take into account a new technology or a new set of public demands. Still another is simply to allow the organization to fade away, since its product is no longer in demand. In some cases an organization will resist any modification of its goals, since it is felt that any change will destroy the nature of the organization. Instead, the organization may adopt a competitive strategy and attempt to minimize or even reverse these environmental changes. In the case of a military organization, the coup d'état constitutes such a strategy. When its corporate survival is threatened by changes taking place in its environment, a military organization, specifically the officer corps, may use its institutional weight to modify this environment. By doing so, the military extends beyond its traditional organizational boundaries and creates a new role for itself as an institution.

The format of military interventions varies. In some cases the military may want to gain full control over all aspects of the environment, not just the political area. In this militaristic type of intervention, the armed forces will attempt to infiltrate and reshape all sectors and all levels of civilian life.[14] However, more usually, the military, after seizing power, limits its control to the political sector. As a result, political parties and the legislative branch are either frozen into inactivity or abolished. The existence of a military regime is acknowledged, but usually only on a temporary basis. A third type of

military intervention leads to a civilian-military regime, where the coup d'état brings about the replacement of the current government elite by a military junta or by a combined military and civilian executive which administers the country on a temporary basis. Occasionally, a military coup will be staged as a veto against the accession to power of a civilian group considered undesirable or the implementation of a policy unacceptable to the military. Often the military will intervene in the political process without staging a military coup simply by bringing sufficient pressure to bear on the civilian leaders to force them to conform to the military's demands.

Whatever the form of military intervention, the major reason for such a move is the military's desire to alter its environment. Military coups are not a quasi-automatic result of the existence of an all-powerful military organization, as the organizational approach taken by some military sociologists would imply. Nor are they necessarily the consequence of a breakdown in the political process, as suggested by many political scientists. Military coups tend to occur when changes in the political, social and economic environment threaten the stability of the exchange process between the military organization and its environment. In such situations the military will use its position as a social institution to redefine the environment and re-establish what it judges to be a normal exchange process with its environment.

However, if environmental changes are a necessary condition for military coups, they are not sufficient. They fail to explain why some military organizations have resorted to coups while others have not, or why coups have been more frequent in certain countries than in others. In other words, environmental changes, especially in Tropical Africa, are a generalized phenomenon which affect all military organizations but do not always produce the same result with the same intensity. The decision by a military organization to use its institutional weight and the propensity with which it will do so depend on two sets of parameters. A first set of parameters determines the vulnerability of the military organization to environmental changes and as such influence its decision to intervene actively in the political arena. Four such organizational parameters are singled out: the nature of the organization's output; the stage of development reached by the organization; the permeability of its boundaries; and the level of integration of its sub-units. These four parameters can be considered as the major components of the process which leads the military to intervene. Two other parameters -- the complexity and the nature of environmental changes -- are more immediately linked with the facility with which the military can carry out its decision to intervene and with the level of military intervention existing in a given country. As we can see these two sets of parameters are closely associated with the two dimensions of military intervention (process and level) singled out in Chapter I.

Military organizations will not always resort to military coups even if their corporate survival is equally threatened by changes taking place in their environment. There must also be a set of conditions which make possible the successful staging of such a coup. These favourable conditions are often created by the same environmental changes which threaten the survival of the organization in the first place. These changes not only affect the exchange relationship between the military organization and its environment and ultimately force it to redefine its institutional role, they also create a set of conditions which may facilitate the application of this new role. For example, a period of economic stagnation can deprive a military organization of financial support and thus prompt it to use its institutional position to reshape its environment. However, this same economic stagnation may create a situation of social crisis which facilitates the execution of a coup. In short, we are proposing to distinguish those factors, mostly organizational, which explain the process of military intervention from those factors, mostly environmental, which explain the level of military intervention.

The Organizational Parameters of the Process of Military Intervention

1. The nature of the organization's output

A first parameter is the nature of the "identifiable something" produced by the organization. The more intangible this output and

the harder it is to measure objectively, the more difficult it becomes for the organization to evaluate accurately the impact of environmental changes on its product and to adapt itself to new conditions. For example, it is far easier for an automobile manufacturer to assess and adapt to environmental changes such as a set of new anti-pollution regulations, than a university or a military organization. Because of this uncertainty, an organization which produces an intangible output will find it difficult to distinguish between those environmental changes which constitute a real threat to its corporate survival and those which are only peripheral to its continued existence. Consequently, it becomes vulnerable to even the most inconsequential changes in its exchange process with the environment.

2. The stage of development of the organization

A second parameter which needs to be taken into account is the stage of development reached by an organization. Organizations usually possess boundary-spanning structures (Thompson, 1962, p. 309) which facilitate the transaction process between the organization and its environment and are an important means through which the organization receives and adapts to environmental changes. Organizations may even develop special adaptive sub-units whose responsibility it is to predict the direction of environmental changes, their probable

impact on the organization and the best organizational response. Research and development or public relations units are normally concerned with such tasks. During its earlier stages, an organization is more vulnerable to environmental changes since it is unlikely to have developed and experimented with those specialized roles and sub-units which serve to institutionalize relationships with the environment and to predict future changes.

A military establishment with a long tradition of service will often be less vulnerable to environmental changes. The more important the role the armed forces has played in the history of a country, the more difficult it is for the political authorities to modify its status and its role. For example, an army which played a crucial role in a struggle for national independence is less vulnerable than one which was created after independence was achieved. On the other hand, armies which have evolved from guerrilla bands have not usually developed any military tradition of their own and as such will often be the first victims of the post-independent political stabilization process.

3. <u>The permeability of the organization's boundaries</u>

The extent to which environmental changes affect the legitimacy, goals and functions of an organization also depends on the nature of the organizations's boundaries. The boundaries

can be identified by the set of procedures and beliefs which differentiate organizational from non-organizational elements. An organization's boundaries act as a filter through which environmental changes are channelled and interpreted to the organization. For example, recruitment is one of the most important channels through which the environment influences an organization. Often, organizations such as the military, which attempt to ignore certain social and political problems affecting their environment, for example, racial or political tensions, find these same problems introduced into their organization through recruitment.[15] Organizations differ in the degree to which their boundaries are permeable. These differences, in turn affect the impact of environmental changes on different organizations' structure and behaviour.

The permeability of organizational boundaries varies from those organizations with extremely rigid boundaries, such as military organizations, to organizations with very open boundaries, such as the Canadian Liberal Party. In the first case there are specific and rigid procedures governing the entrance and exit of members of the organization (induction, training and discharge procedures). On the other hand, it is characteristic of a cadre political party such as the Canadian Liberal Party that it has very loose criteria for entrance to and withdrawal from the party.[16]

Naturally the extent to which the original boundaries of the military organization have been permeated will influence its vulnerability to environmental changes. A military establishment with a well-developed sense of corporate identity and where the recruitment and training programmes have not been contaminated by political considerations will adapt more easily than one whose boundaries have been blurred by the inroads of civilian considerations.

While allowing the input-output exchange to take place, an organization must also maintain its integrity as a system by preserving a capacity for autonomous decision. Its boundaries must not be so permeable that it loses all control over the exchange process with the environment. On the other hand, if its boundaries are too rigid, it will become isolated from its environment. Such isolation may prove beneficial for a short time but in the long run it can only be detrimental to the organization's capacity to assess the significance of environmental changes correctly and thus select the proper response.

4. <u>The integration of sub-units in the organization</u>

According to Lawrence and Lorsch, the successful organization is one which succeeds in maintaining a balance between internal differentiation and internal cohesion which is "consistent with the

diversity of the parts of the environment and the required interdependence of these parts (1969, p. 134)." An organization with a high level of co-ordination and integration among its various sub-units will usually be more successful in interpreting and adapting to environmental changes. Information about the environment can be gathered and assessed more efficiently in highly integrated organizations. Because its sense of purpose is not undermined by a lack of internal communication or by contradictory reactions from different sub-units, the organization is less vulnerable to rapid environmental changes.

In short, we are suggesting that an organization with an intangible output, with a recent history, with permeable boundaries and a low level of internal integration is likely to be affected by environmental changes to a greater extent than an organization with a well-identified product and a long history which has provided it with highly institutionalized boundaries and a high level of internal integration.[17]

The Environmental Parameters of the Level of Military Intervention

Turning to those factors which affect the level to which an organization will make use of its institutional weight to redefine its environment, we have identified two such factors: the complexity of

the environment and the nature of the environmental changes.

1. The complexity of the environment

Not only is the environment a distinct entity from the organization, it can also take on different meanings depending on how it is perceived by an organization. Tagiuri and Litwin (1968) suggest that there is a subjective and objective environment whose perspection depends on the cognitive map used by each organization to interpret this environment. In fact the environment alone makes little sense for an organization unless it is perceived in a particular way. As Barnard points out, the environment to be intelligible "requires a basis for discrimination, for picking out this and that as pertinent and relevant (1968, p. 196)." This process of interpretation identifies those aspects of the environment relevant to the organization "depending upon conditions internal to the organization and upon variations in the environment itself (Barnard, 1968, p. 14)." However, Terreberry (1967) points out that the more reactive and turbulent the environment, the more difficult it is for an organization to evaluate correctly the scope and significance of environmental changes. As a result, every organization faces a dilemma in deciding to what extent it should adapt and to what extent it should stay put in the face of environmental changes. These decisions are

particularly difficult to make in the case of organizations like African armies, with little organizational history, few efficient boundary-spanning structures and a very turbulent environment. They are more likely to make the wrong decisions and over-react to environmental changes. As a result they tend to intervene repeatedly in the political process to modify an environment which becomes increasingly complex and turbulent as a result of their interventions. These frequent interventions only serve to accelerate the rate and complexity of environmental changes which increase the strain on the boundary-spanning structures for a correct interpretation of the new environment.[18] Consequently it will become more difficult to differentiate between those changes which are important for the organization and to which it must adapt, and those sudden but temporary modifications arising out of a turbulent environment.

2. The nature of environmental changes

The most important factor in explaining the level of military intervention is to be found in the nature of the specific environmental changes rather than in the complexity of the entire environment. Naturally, not all changes in the environment affect an organization with either the same intensity or in the same way. In the case of military organizations, changes in the technological environment are often those with the most immediate and through impact. Janowitz (1970)

suggests that in developed countries, the distinction usually made between civilian and military organizations has been increasingly blurred as a result of a new weapons technology "which vastly expands the size of the military establishment, increases its interdependence with civilian society, and alters its internal social structure (Janowitz, 1960, p. 12)." As a larger percentage of the national income is spent on the military and as weapons of mass destruction equalize the risks of warfare for both the civilian and military population, considerable pressures are exerted to open a nation's military and defence policies to general political debate. As wars become more expensive, and the civilian population more directly concerned, the military ceases to be isolated from the arena of partisan politics. The net result of these technological changes has been a deterioration of the military's organizational boundaries. As its need for competent technicians and managerial leaders increases, the military has become more dependent on the quality of the education system and the level of technological development of the civilian sector. In the past, the boundaries of the military organization were protected by the distance which the military maintained from the rest of society. Military camps, military tribunals, schools and uniforms all served to isolate the army. Today these barriers are no longer adequate in the face of the military's need for new skills and new technology.

A sudden modification in the configuration of international politics is another environmental change which has profound repercussions on the military organization, especially with regard to its goals. The institutional importance of the military is in part determined by the army's importance as an instrument of foreign policy. The increase in arms control agreements and the decreased importance of numerical military strength has reduced this instituional importance. When the state operates in a friendly international environment, or at least one in which there is opposition to the use of force as a means of settling disputes, political leaders tend to question the value of an expensive army. In these circumstances, pressure will develop for a redefinition of the goals of the military organization, moving towards internal security or civic action projects.

Changes in the internal political and socio-economic environment of a nation can also have an effect on the military. For example, participation in an unpopular foreign war, such as the French-Algerian conflict, can raise the question of the army's legitimacy and make it into a target for political debate. Similarly, a decision by the political leaders to make alternative use of the army, manpower and skills, for example, to build roads, would influence the army's image of itself and also its image among the general population. In

addition, a decision by the political leaders to use the army as a supplementary police force in cases of civil conflict will again modify the image of the army and also activate latent ethnic and political conflicts within the military organization itself. In other cases, a government dedicated to rapid and extensive social change can result in a decrease in the government's financial support for the armed forces, or a redirection of its goals to more civilian lines such as road building or customs duty.

The environmental changes which can have an impact on the military are not limited to the political arena. Economic and social transformation may also have a disturbing impact on the military organization. For example, a deterioration in the economic situation can force political leaders to reduce the financial support of the military. Alternatively, economic stagnation can compel a government to increase the size of its armed forces to relieve unemployment. In states where a high level of tension exists between two ethnic communities, political leaders can impose a policy of equal representation of the two groups within the armed forces which in turn influences the military's internal cohesion.

In developing countries, a sudden change in the technology of warfare, like the advent of tactical nuclear weapons will have little impact on the military organizations. In developing states, particularly in Africa, military organizations exhibit little vulnerability to technological innovations because of their limited use of sophisticated weapons technology. They tend to be more concerned with changes taking place in the socio-political environment. As a result, a decline in the country's economic growth will have more impact on the goals, legitimacy and internal arrangement of an African

military establishment of 1,000 men than the successful testing of a new anti-missile missile for which an African army will never have any use. Furthermore, because of their small size and short history, Third World armies have not developed specialized sub-units whose responsibility it is to predict and assess environmental changes. On the other hand, a large and modern military establishment, such as the American one, is likely to possess boundary structures and skills to assess and adapt to a changing political environment.[19]

Although we have stated that in the case of African armies changes taking place in the social, economic and political environment are more important to determine the level of military intervention than changes in the technological or world political environment, we will not discuss at this stage the specific kind of environmental changes which are likely to increase the military's propensity to intervene. This question will be taken in Part III when we proceed to test the causal impact of six characteristics of the African environment variables on the level of military intervention, namely economic development, social mobilization, political participation, party institutionalization, government penetration and internal conflict.

As this approach suggests, the major causes of military coups are not to be found exclusively in the environment, or in some of the

organizational features of the military, but in the changing nature of the exchange process taking place between the two. In fact, military intervention can be said to involve a dual, although parallel causal process where both environmental and organizational factors when taken together, can be considered as necessary and sufficient conditions to explain the phenomenon of military intervention. The organizational parameters can be considered as the immediate causes of the military's decision to intervene in politics in the sense that they are the factors most closely connected with the structuring of this decision. Environmental parameters on the other hand do not act in the same way. For example a low level of economic development cannot be said to cause the military's decision to intervene in the political process in the same way as a governmental decision to abolish the armed forces. Environmental factors such as those identified in chapter IV contribute to define at a more systemic level, those conditions in which the military is more likely to take and implement its decision to intervene.

This approach has a number of advantages over the two outlined in Chapter I. Not only does it allow for an integration of the organizational and environmental factors, it is also more dynamic, since it

views military intervention as but one step in an on-going process of interaction between society and the military organization. It also allows for a distinction between the causes behind the decision to intervene and those conditions which facilitate the implementation of this decision and increase the army's propensity to intervene. For example, the military can decide to intervene out of a feeling of despair and apprehension over its own corporate survival and at the same time benefit as an institution from its ability to carry out this decision.

There are also several drawbacks to this approach. It assumes that all organizations including military organizations have goals which are distinct from those of the individual members of the organization. Even more basic is the assumption that all organizations are goal-oriented. Maniha and Perrow (1965) in their study of the "reluctant" organization remind us that certain organizations have no goals in the first place and that individuals may join an organization because they enjoy one another's company or because they want to take part in some activity which is really peripheral to the official goals of the organization.

This approach also assumes that an organization can be considered "an indispensable manifestation of the historical man (Touraine,

1965, p. 181)" and as such should be analyzed as a social actor in its own right. According to its own rationality, this actor is said to defend some particular interests which do not always correspond to the interests of the individual members of the organization. It can be objected that such a functionalist perspective tends to give too concrete an image of the military organization and thus detracts from a clear understanding of military coups.

Part II of this study will discuss the historical development of African military organizations. Applying the framework of analysis defined in this chapter, it will illustrate how the changes which took place in Africa during the 1880-1960 period affected the exchange process between African armies and their environment and thus prompted them to use their institutional weight to redefine their environment. This historical reconstruction of the interactions between the organizational and environmental causes of coups should allow for a re-evaluation of the view of African armies as strong, coherent and modern forces, presented by several military sociologists.

Part III of this study will attempt to identify and relate those environmental conditions conducive to a high level of military intervention. A formal model will be constructed and tested for its capacity to identify those environmental characteristics which explain the different levels of military intervention in the states of Tropical Africa.

NOTES AND REFERENCES TO CHAPTER II

1. See Lang (1962) for an historical overview of military sociology.

2. Blau and Scott (1962) define the organization by the existence of specialized administrative staff. Selznick (1961) also points to the administrative integration of specialized functions as the central characteristic of every organization. For an historical overview of organization theory see Etzioni (1960), Perrow (1970), Scott (1969) and Wolin (1969). For a structural approach to organization theory see Thompson (1961), Presthus (1962) and Krupp (1961).

3. For example, Poulantzas (1969) and Touraine (1969) see the university as the central element in the society's reproduction system.

4. Barnard (1938), Wiener (1949) and Snyder (1958) have all recognized that environments determine organizational behaviour but they do not specify the link between environmental processes and organizational behaviour. For an extensive review of the literature on organizational environment see Gelbach (1971).

5. On the concept of environment in recent organizational theory see Emery and Trist (1965), Thompson (1967), Thompson and McEwen (1958) and Rice (1963). This concept is also applied in social psychology, see Chein (1954), Forehand and Gilner (1964), and Bates (1968).

6. The literature on the exchange dimension of every social relationship is vast. See especially the works of Blau (1964; 1968), Dahlstrom (1968), Homans (1958) and Thibault and Kelley (1959).

7. This presentation borrows heavily from the works of T. Parsons (1956; 1957; 1958; 1970). Parsons' organization theory is criticized in Black (1961) and Bourricaud (1955).

8. This study will here not deal with these internal features of the military. Janowitz (1960), Huntington (1957) and Levy (1962) provide extensive descriptions of such features.

9. This distinction between organization and institution is elaborated in Allport (1933), Martindale (1966), Selznick (1957) and Taylor (1956).

10. Touraine first presented this approach in his Sociologie de l'Action (1965). Parsons (1951, 1952, 1961) also develops an action oriented sociological theory but in a different direction altogether more functionalist and less critical. See also Gouldner (1954) and Merton (1957).

11. Lowrau (1970) suggests that institutional analysis ("l'analyse institutionelle") is necessary for a full understanding of the organization: "Définir rationnellement une organisation par les services qu'elle rend ou est censée rendre n'est pas suffisant. Il faut aussi tenir compte du fait que l'usine, ou la firme, produisent des modèles du comportement, entretiennent des normes sociales, intègrent leurs usagers au système total (Lowran, 1970, p. 13)".

12. See David Sills (1957) for a study of the impact of environmental change on an organization concerned with infantile paralysis.

13. The problems of inter-organizational co-operation and of organizational autonomy are explored in detail in Levine and White (1961) and Dill (1958). Organizational conflicts, not discussed here, are examined in Boulding (1962) and Pondy (1967).

14. Described by Lasswell (1941) in his analysis of the Garrison state.

15. This point was first made by Katz and Kahn (1966).

16. The distinction between a cadre and a mass political party is taken from Duverger (1967).

17. Naturally, not all the factors which determine the vulnerability of an organization to environmental change are included in the list of parameters. For example, the elasticity of the demand for an organization's product, the size of an organization, its past record in adapting to changes, are not specifically considered. It was felt that these additional parameters are either included in, or secondary to the six parameters listed above.

18. Ruff (1970) and Hegland and Nylehn (1968) make a similar point although in a different context.

19. Since the concept of military professionalism seems applicable principally to the military organizations of Europe and North America, little use of it has been made in this study. For an overview of military professionalism see Janowitz (1960, 1969) and Van Doorn (1964).

PART II

THE PROCESS OF MILITARY INTERVENTION: THE ORIGINS AND TRANSFORMATIONS OF AFRICAN MILITARY ORGANIZATIONS

CHAPTER III

THE AFRICAN ARMED FORCES AS ORGANIZATIONS AND INSTITUTIONS 1880 - 1970

This chapter will make use of the analytical grid developed in Chapter II to examine the relationships between African military organizations and their political environment during the period 1880 - 1970. It will try to show that one set of reasons connected with the decisions of African armies to intervene in the political process is to be found in their increased vulnerability to environmental changes. Consequently, military coups will be seen as the result of a decrease in the organizational capabilities of African armies and not of any organizational superiority as it is often presumed.

The Pre-Colonial and Tribal Military Tradition in Tropical Africa

Although little is still known of the military configuration of pre-colonial Africa, it seems to have lacked any obvious set of militaristic elements which would help to explain the contemporary resurgence of militarism. While certain historical states, like the Songhah, Yoruba and Mossi, had developed permanent forms of military organizations, others, as in the case of Ghana and Mali, relied for their defence on ad hoc military arrangements.[1] Equally difficult to assess insofar as contemporary military coups are concerned, is the existence of an African military tradition at the tribal level.

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Certain tribes like the Kipsigis and Shambalai of Kenya or the Nyakyusa of Nyasaland had very little use for wars and heroic virtues. Other groups like the Mende of Sierra Leone, the Kuanyama and the Ngoni of East Africa were originally established as military societies, and soon came to regard war as a permanent state of affairs and fighting ability as an important aspect of political leadership (Peristany, 1939; Wilson, 1951; Wianas, 1962).[2] Thus evidence as to the existence of a pre-colonial or tribal military tradition in African is still not clear. Until new knowledge is uncovered, the distant pre-colonial past can contribute little to our understanding of the post-1960 phenomenon on coups in Tropical Africa.[3] The colonial experience is far more productive as an explanatory tool.

The African Colonial Forces and European Domination (1880-1945)

After the works of Rothberg and Mazrui (1970), Cartey and Kilson (1970) and Ranger (1967), the view that the European conquest of the African continent was achieved because of the Europeans' moral superiority coupled with the Africans' secret desire for subjugation can no longer be supported.[4] While it is true that the Africans could not prevent the European conquest (Colson, 1969), in a number of instances they did offer strenuous and effective military resistance. For example, it took eight campaigns and 84 years for the British to crush the Ashanti resistance.[5] Equally violent military confrontations erupted between the colonial invaders and the Emirates of Northern Nigeria, the slaving chiefs of Malawi and the various tribes of Eritrea and

Western Angola. In the Sudan Samory Ture and an army of 20,000 men resisted for 28 years all French attempts at "pacification". But Samory's large-scale military resistance movement stands alone. Most other cases of violent resistance were limited to small scale operations and ambushes.[6]

Instead of fighting, most African chiefs chose to use their military strength and the relative weakness of the European position to insure their own immediate survival and to secure political advantages for themselves through the elimination of rivals or the subjugation of neighbouring tribes. Such political considerations help to explain the willingness of many tribal chiefs to contribute men to the various European military expeditions of the late nineteenth century.[8]

These expeditions served to open the eyes of the Europeans as to the military potential of African soldiers. France had made some use of colonial troops in its eighteenth century battles against Britain, but the first systematic use of colonial forces only came with the creation of the Tirailleurs Sénégalais in 1857. The Tirailleurs were used extensively in the conquest of West and Equatorial Africa where they accounted for 80 per cent of the French casualties.[9]

In the Belgian Congo, the Force Publique, created in 1886, at the insistence of the Vienna Congress, initiated numerous expeditions from Katanga to the Nile. All in all 662 Belgian officers were killed during these military operations while the death toll for African recruits reached the 10,000 mark.[10]

In South West Africa, the Germans introduced general conscription in 1896 in an effort to stamp out local military resistance. From 1883 to 1907, 383 violent clashes took place between the German forces and the African tribes resulting in the death of 3,348 European officers and more than 15,000 African recruits.[11] Unlike the other major colonial powers Great Britain tried to keep the military confrontations with African populations to a minimum. It made little use of African recruits during its colonial conquest of Africa. However, when a show of force was inevitable, as in Nigeria, African rather than European forces were used to assert the British presence.[12]

Having proved their usefulness in various campaigns for the conquest and "pacification" of Africa, colonial troops were then used extensively to maintain law-and-order in the newly conquered territories. In British West Africa the first African based military forces were raised not so much for conquest purposes but to fulfill police duties after the arrival of the traders and merchants. In the case of the Lagos Constabulary first raised in 1863 and of the Royal Niger Regiment, raised in 1894, the specific mission was "to keep order in the Protectorate, enforce the Authority of the Government and suppress barbaric customs such as cannibalism, killing of twins (Geary, 1965, p. 105)." During the 1886-94 period alone the Niger Constabulary participated in 56 major "peace-making" operations.[13] However, it was in the Belgian Congo that "native" police troops were used most extensively. In 1894 the strength of the Force Publique had already reached more than 10,000 men and received 45 per cent of the budget for the entire colony. From 1891 to 1905, 44,440 Africans were recruited in the Force Publique and

in the words of Janssens, the last commander of the Force, their devotion to the Belgian cause was unquestionable:

> Jamais les troupes de la F.P. n'ont failli à leur devoir de rétablissement de l'ordre intérieur; en aucune circonstances elles n'ont refusé de tirer sur la foule soulevée contre la loi (Janssens, 1960, p. 242).

In addition to their contribution to the conquest and policing of Africa, colonial troops were also used in the on-going struggle between the colonial powers for a share of the African continent. In fact it was these rivalries which provided African colonial forces with their official acceptance by colonial military planners. For example, by 1897 it had become evident to the British Colonial Office that simple police forces could no longer deter the French who, having conquered Dahomey in 1894, were now moving closer to the Nigerian Protectorate. Plans were drawn up to organize an African regiment of British officers and African recruits. In 1900 the Royal Niger Company and the Lagos Constabulary were disbanded and their members incorporated in the Northern and Southern Regiments of the newly created Royal West African Frontier Force.[14] The first regular African colonial regiment in British Africa was thus born.

The creation of African colonial regiments also served other purposes, especially in those territories where active military resistance had been encountered or where tribal military activities had to be curtailed. In these territories the new colonial forces provided an alternate avenue for "unemployed warriors". For example, after the

Ashanti war of 1896 the British established a local military force made up of African recruits and British officers hopefully to prevent the recurrence of further uprisings.[15]

Once their initial missions had been carried out, colonial authorities particularly in France, began to consider integrating the African regiments within the metropolitan defence structure. Already in 1900 and 1905 the French National Assembly had enacted legislation allowing for the recruitment of "natives" through a volunteer system with the provision that conscription could be used if necessary.[16] In 1907 a government commission recommended that North Africans be recruited for service in North Africa. Expanding on this recommendation, Colonel Mangin suggested that the French government seek to establish a Force Noire defined as an "African army whose camp would be in Algeria but with its reservoir in West Africa (translated from Mangin, 1910, p. 101)."[17] In favour of the Force Noire, it was argued that Africa constituted an infinite reservoir of potential soldiers who could bring the French military strength up to par with the German which had profited from a higher birth rate. Second, France in the aftermath of the Dreyfus Affair, was experiencing a renewal of anti-militarism led by Jaurès. This atmosphere made the idea of using Africans rather than Frenchmen as soldiers very appealing. However, the most important justification for establishing the Force Noire was the supposed superiority of the African soldier on the battlefield.

> le système nerveux du noir est beaucoup moins développé que celui du blanc . . . il est certain que nos noirs peuvent figurer sur n'importe quel champ de bataille. Ils y apporteront un calme et un fatalisme précieux dans la guerre moderne où le grand danger est l'extrême nervosité des peuples civilisés (Mangin, 1909, p. 28).[18]

There was little opposition to the principle of a Force Noire, only discussion as to its proper use. Jaurès, for example, considered the Force Noire as "a serious effort given by the Black masses organized under French discipline (translated from Ly, 1957, p. 35)." His only doubt came from the fear that such a force would be used in France against striking workers.

In 1910, the French National Assembly adopted the project of a Force Noire and Mangin, returning from a fact-finding mission in West Africa, reported that anywhere from 8,000 to 40,000 Africans could be recruited annually for service in the Force. By 1912 it had become clear that even this minimum number could not be raised under a voluntary system and conscription was thus authorized. Any African resident of a French colony, between the ages of 20 and 28 could be required to serve for up to four years. Responsibility for providing conscripts was left to the local chiefs who used the opportunity to get rid of any local undesirables.

During the 1890-1914 period military forces in the British territories continued to be organized on ad hoc basis with little attention being given to integrating them into the overall defence structure of the Empire. Military operations were kept to a minimum and the general practice was for British regiments to ear-mark specific

troops and officers for the colonies.[20] It was for purely economic reasons and only on the eve of World War I that the British amalgamated local territorial units, first created from local police forces, into area units, for example the West African Frontier Force and the Kenya African Riffles.

When World War I erupted, France already had a military structure equipped to handle a massive recruitment of African soldiers and their rapid incorporation into the French military structure.[21] In 1914 alone more than 30,000 African recruits were sent to Europe from French colonies. For the entire duration of the conflict 225,300 soldiers and 107,000 support personnel were recruited in French Equatorial and West Africa (85 per cent of all French colonial forces). For those units which underwent battlefield experience casualty rates of 35 to 60 per cent were not uncommon.[22] Following complaints by Diagne, an African who had been made Commissaire de la République, a few privileges were granted to African recruits: partial exemption from income tax, employment preferences, family allowances and priority in medical and agricultural schools. But these were not still sufficient inducements to attract the necessary number of recruits. By 1918 a rising number of Africans were fleeing to neighbouring British territories where no conscription existed.

The war effort in the British African territories was not as extensive as that in French Africa, nevertheless 87,000 Africans served as soldiers and close to 800,000 as support personnel with the British forces. Although relatively few Africans served outside of the continent,

approximately 6,000 African soldiers and 100,000 support personnel serving in British regiments died during the conflict.[23]

During the inter-war period, the status of the French colonial regiments was modified as a result of the new strategic and political conditions created by the Peace Settlement. First, the Versailles Treaty explicitly forbade the organization of indigenous colonial armies (except for police duty) or the construction of military bases and fortifications in colonial territories now under mandate. Second, there was renewed resistance to the idea that African troops could effectively replace Frenchmen in the defence of their country. In the words of Azan, the idea of a mercenary army is "false and despicable. All nations which have used mercenary soldiers have disappeared and most often have perished by them (translated from Azan, 1925, p. 9)." The rise of the Pan-African movement under the leadership of Garvey also accentuated those fears of a revolt by native soldiers which could engulf the Republic.[24] Third, in 1918, Germany could no longer be considered an immediate military threat: its army had been reduced to 100,000 men, its air force and navy sharply curtailed and its colonies re-distributed among the victorious allies. Thus there was less need for a massive French army. Fourth, the rise of a new military doctrine which stressed the importance of firepower equipment rather than manpower further undermined the demand for large land armies. Even more important was the fact that it was becoming increasingly difficult to meet the already much reduced quota of African recruits. For example, in 1918 the contingent from Tropical Africa was to be 100,000 men.

In 1920 this figure was scaled down to 63,000 and in 1926 to 24,000. However, even this quota could not be met because of African passive resistance.[25] In 1924, 13 per cent of the conscripts failed to appear. In Upper Volta alone the figure for non-appearance reached 44 per cent. Many Africans saw military service as a disguised form of forced labour. A 1926 decree confirmed this impression by allowing the civilian authorities the use of military reservists for public works.[26] Nor was the possibility for military advancement for Africans very encouraging. Until 1926, the African Non-Commissionned Officer (N.C.O.) could not expect to rise above the rank of lieutenant and then only after 15 years of service. After 1926, and under special circumstances, he could attain the rank of captain.[27] Under no circumstances could an African N.C.O. be put in command of European troops or in charge of an administrative unit.

In the British colonies the post-war pattern was one of return to the pre-war situation. Both the West African Frontier Force and the Kenya African Rifles were returned by the War Office to the control of the Colonial Office where the main consideration was one of economy rather than military efficiency. As a result the W.A.F.F. went from a total strength of 5,740 soldiers and 152 officers in 1920 to 2,380 soldiers and 86 officers by 1933 (Bartlett, 1956). In 1931 it was decided, partially for financial reasons, to abandon the practice of appointing one native officer per company who was responsible for investigating complaints and administering small punishments. This change further reduced the attractiveness of the military profession in the eyes of Africans.[28]

During 1918-39 period the African regiments had little to do. Occasionally they were used on peace-keeping operations: against the Masai in 1918, against the Mad Mullah rebellion in 1919, in Jubaland in 1925 and against Abd-el-Krim in 1925. Strategically their role was seen as a reservoir of manpower for use in mass attacks. According to a directive from the Service Technique des Troupes Coloniales, the use of African soldiers should be limited to two types of situations:

> Si une mission de sacrifice s'impose, défense sans esprit de recul, pour procurer le temps nécessaire à un regroupement des forces.
>
> Pour une attaque brutale visant la rupture du front défensif adverse, on peut employer des troupes noires en forte proportion, peut-être même en exclusivité (France, 1928, p. 134).

In World War II, 170,000 Africans were inducted into the French Army but could not be used extensively because of the 1940 armistice. Even so, between 1942 and 1945, 100,000 Africans joined the Free French Forces and at one point they constituted 50 per cent of its manpower. The precarious military position of the Free French resulted in additional possibilities of advancement for African soldiers and N.C.O.'s. In the British territories 370,000 Africans were enlisted in the British war effort. Close to 40 per cent of those served outside their home territories particularly in North Africa, Sicily and Burma.[29] By the end of World War II the African colonial regiments could no longer be considered to have a particular strategic skill, simply because of their qualities of obedience and blind courage. New developments in warfare had made these qualities obsolete. Only when they were able to use the weaponry of modern war were colonial troops of any military value.

When applied to the 1880-1945 period, the analytical grid developed in Chapter II points to certain features of colonial African military organizations which are important for an understanding of their subsequent behaviour. First, these forces are of relatively recent origin. It was only in the late 1890's and early 1900's that they were organized on a permanent basis. The situation is thus radically different from that of Latin America (Alba, 1962; Johnson, 1964), the Middle East (BeEri, 1969; Fisher, 1963) and even Asia (Rakwijitt, 1965), where contemporary forms of military organizations have a much longer historical development. African armies are essentially young organizations and as such they are more vulnerable to environmental changes than organizations with a long historical tradition.

Second, African colonial regiments were not developed as in Thailand and Pakistan (Khan, 1963; Wilson, 1962) on the foundations of any pre-colonial military apparatus. As organizations, African colonial regiments are the creation of the colonial powers. They have few or no roots in an indigeneous military tradition. On the contrary they were created and used extensively to eliminate traditional African military organizations. Even their short organizational history is entirely associated with what has come to be seen as the dark period of African history, the period of colonial domination. There is no glorious pre-colonial tradition to go back to; nor were the reasons for the creation of African armies particularly attractive. Raised to help in the conquest of Africa, these forces were later transformed into regular regiments when the need for para-police force became urgent.

The establishment and maintenance of European colonial rule over Tropical Africa would not have been possible without them.

In the post-1945 age of African consciousness and négritude, the nature of the "identifiable something" produced by these early African military organizations did not provide them with a favourable image among the nationalist elites or even the population at large. Their creation became synonymous with the establishment of European rule. Because of this close association with the colonial presence and their control over the instruments of violence, African regiments were treated with respect by the African populations but they did not enjoy any great popularity. The servitude of conscription and military service, which often degenerated into forced labour only accentuated this indigeneous resentment which expressed itself in frequent revolts against conscription notably in the French Sudan, Dahomey and Volta regions.[30] Military service was not considered an opportunity to further one's status since the ex-soldier, when demobilized, was condemned "to a miserable and timid existence, or if he has acquired a vigorous mind of his own, and the custom of speaking loudly, he does not hesitate to exploit those who surround him (Buell, 1928, p. 19)."

Third, not only were the goals and legitimacy of early African regiments provided by the colonial presence, but the internal arrangements of these forces were also entirely dictated by the requirements of colonial military planners. More attention was paid to the need of integrating these forces within the metropolitan military structure

than to the welfare of the individual members or the African populations. No attention was paid to the ethnic and tribal proportions among the various ranks, the geographic origin of the recruits, their level of education, their training or the possibilities for African soldiers acquiring a general education and certain trade skills. In the recruitment of African soldiers Imperial rather than territorial considerations were predominant, sometimes with curious results. For example, until 1914 army units in British Africa were made up of a mixture of Sikh volunteers, British officers and N.C.Os, Indian skilled tradesmen and African soldiers. From Nigeria, Kenya or The Sudan as described by Gutteridge, the ideal soldier, according to European officers was "an illiterate, uncontaminated by mission education and from a remote area (1969, p. 9)." In West Africa warrior tribesmen from the Muslin regions of the interior were preferred to the animist or Christian converts of the coastal regions because they were judged to be more loyal to their European officers.

Fourth, the regional rather than territorial basis on which African troops were organized prevented them from developing any sense of close identification with any territorial unit or with a specific population group. Furthermore the fact that colonial regiments were administered from London or Paris and were constantly moved in and around Africa made such an identification even more difficult. As a result African regiments rapidly became strangers in their own land. They did not develop any close contacts with the new African elites. Their models for behaviour continued to be found in Sandhurst or Saint

Cyr rather than in Lagos or Dakar.

Finally, if the African regiments were insulated from the African reality they were also fully dependent on the evolution of European politics and European military technology for the definition of their role and for their internal arrangements. As the need for land armies subsided, the strategic usefulness of the African regiments also diminished. These regiments could be effectively replaced by police forces on exploration and peace-keeping missions. There was therefore little need for the colonial governments to continue to spend large sums of money on their maintenance. As a result financial support was seriously curtailed and their role was re-defined, at least in the French territories, in the direction of civic action and public works. Also as the African political environment itself changed, the close identification between the colonial military forces and the colonial authority created new problems for these military forces.

The global image of African regiments which emerges is one of organizations with little autonomy, and which are entirely dependent for their goals, legitimacy, resources and internal arrangements on extra-African factors such as the French-German rivalry or the arrival of mechanized warfare. Paradoxically this almost entire lack of autonomy allowed for both a high level of organizational modernity and the total absence of any institutional importance. Because of the absence of a powerful, indigeneous military tradition and because of the requirements of Imperial defence planning African military organizations were

structured along the lines of the most modern principles of military thinking. The massive presence of expatriate officers and the fact that these forces were not used to fight in Africa itself for long periods of time, prevented the rise of a dual, metropolitan and indigenous, military structure as was the case in India (Singh, 1952). From the start the format of African armies was essentially modern and underwent no adjustment to specific African conditions. There was no combination of modern and traditional elements. In return this isolation from the African scene made for the institutional insignificance of African military organizations. Although originally indispensable for the purpose of conquest and pacification, African regiments became less and less significant. As a result they could do little to modify some of the environmental factors which were beginning to affect them in a negative way. Without any ressources of their own, their legitimacy tied to that of the colonial presence and their internal arrangements modelled on those of European armies, they were badly equipped to affect or even adapt to the changing African environment. Isolated as they were in the African social fabric, they could easily copy European military models but they could not develop any of the boundary-spanning structures necessary to interpret and adapt to the changes taking place in their own socio-political environment. In short African military organizations were ill-prepared to face the post-1945 period.

The African Colonial Forces and the Transition to Independence (1945-58)

With the post-war defence reorganization of the colonial powers, the African colonial armies' loss of strategic importance was confirmed. At the same time they became more dependent for their financial support and organizational development on the evolution of territorial rather than European politics. Although the French, Belgian and British differed widely in their decolonization practices, the final impact on the evolution of their colonial forces was quite similar. In all cases it led to noticeable decline in the organizational capabilities of the colonial force and increased isolation from the struggle for national independence.

Great Britain emerged from World War II victorious, but financially exhausted. Its military responsibilities as a major member of the Allied coalition, its political leadership of the Commonwealth, and of non-communist Europe and its financial custodianship of the Sterling zone all exerted a great strain on its resources. To meet the challenge of the post-war military situation, Britain proceeded rapidly to a reorientation of its defence policy. At the time of his appointment as Chief of the Imperial General Staff in 1946, Field Marshal Montgomery (1958) enumerated the three objectives of this new British defence policy: an increased reliance on regional military alliances, preservation of the freedom of the seas and close control over the Middle East. No mention was made of the Commonwealth or of the British African territories. By 1950 any idea of an Imperial or Commonwealth defence organization along the lines of the old

Imperial Defence Committee had been definitively abandoned.[32] The colonies no longer played any role in a global British defence policy. Their security would now have to come from their own resources and from the pooling of these resources on a regional basis.

In Africa two conferences were called to implement this new orientation. In August 1951, delegates from the major colonial powers plus representatives from the Ethiopian, Egyptian and American governments met to discuss the problem of rapidly moving troops and supplies to and from Central and East Africa in case of war. The conference recommended an integration of the participants' military communications. Another conference of all British West African administrators was called in 1953. The British government made clear its determination to return to the 1939-45 policy, when the territorial governments had set up and financed some units of the W.A.F.F. The conference finally agreed that steps should be taken in each territory "so as to make it clear beyond doubt that its military forces are the national forces of the territory, established for the purpose of ensuring the immediate defence of the territory in an emergency and the maintenance of peace, order and good government in the territory (Great Britain, 1954, p.3)."

This defence reorganization and the recognition that national independence was likely to be an inevitable rapid and hopefully peaceful process convinced the British defence authorities and the local territorial governments to curtail further financial support of the African regiments.[33] Table I shows the application of this policy. After

TABLE I

MILITARY EXPENDITURE BY GREAT BRITAIN ON ITS AFRICAN MILITARY FORCES, 1950-59 (IN POUNDS)

Year	West Africa	East Africa
1950	1,315,902	1,208,283
1951	1,304,292	1,195,926
1952	1,267,082	1,162,432
1953	2,180,573	1,723,396
1954	2,384,565	2,485,827
1955	2,649,786	2,856,971
1956	2,213,857	2,462,876
1957	2,125,000	625,182
1958	14,000	83,833
1959	20	

Source: Great Britain, War Office, Army Appropriations Account, 1950-51 to 1959-60.

1953 the British contribution to the financial support of the African regiments rose only slightly. Meanwhile, as Table II shows, the territorial governments appeared unwilling to divert any major part of their resources to support these regiments.

The British decision was apparently a reasonable one. The African colonial forces were thought to be sufficiently trained and equipped to deal with any incidents that might arise during the process of constitutional adjustment. Also it was highly unlikely that African troops would again be needed or indeed could be used effectively outside of Africa. Finally, since these forces would eventually be transferred to the new African governments there was little incentive for the British government to spend huge sums of money on them.

The end of the war did not bring the same radical and immediate re-orientation of French defence and colonial policies. In many ways the French policy was ambiguous. For example, although the Brazzaville Conference of 1944 had made it clear that independence for the African colonies could not and would not constitute an acceptable solution, the preamble of the 1946 Constitution stated that "France would lead its colonies to the freedom of self-administration and the responsibilities of self-government."[34] In 1946 the French imperial structure was re-organized to form the French Union. This change increased the number of representatives from the colonies sitting in the French National Assembly and in the Senate.[35] In addition, the Union was provided with its own Assembly and a High Council where French Cabinet ministers and government representatives from the associate territories were to meet

TABLE II

MILITARY EXPENDITURE BY LOCAL GOVERNMENTS IN SELECTED BRITISH TERRITORIES, 1955-60 (IN POUNDS)

Year	Kenya	Northern Rhodesia	Nyasaland	Sierra Leone	Tanganyika	Uganda
1955	1,301,860	*	3,232,252	124,867	604,283	723,032
1956	1,804,162	1,700,000	3,853,529	134,286	652,453	775,508
1957	1,598,705	2,500,000	3,935,263	132,823	661,641	809,633
1958	1,471,926	2,600,000	4,229,606	132,823	675,211	727,891
1959	1,586,867	3,300,000	*	277,121	657,248	756,212
1960	387,749	3,500,000	*	810,969	482,440	802,530

Source: Great Britain, War Office, Army Appropriations Account, 1950-51 to 1959-60.

* Unavailable.

to discuss the Union's policies. This constitutional arrangement could have provided African political leaders with a platform from which to discuss and challenge the military policies of the French government. However, the colonial conflicts in Indo-China and later Algeria coupled with the permanent political instability of the Fourth Republic prevented its effective operation. The new Assembly had only consultative powers and the High Council did not find the time or the incentive to meet until 1951. The African representatives in the metropolitan political structures tended to concentrate on furthering their own political careers or that of the political parties with which they had become associated. Since most of them were also members of the Communist or Socialist parties, they did not tend to concern themselves with military questions.

Over the years there was very little discussion of military questions in the Assembly of the French Union. During the 1955-56 session, only eleven propositions out of a total of 395 dealt with military questions. In 1956-57 this number dropped to five. Most of these questions concerned the status of veterans, the implications of guerilla warfare and the overall defence plans of the French Union. There was no discussion of the military policy of individual territories, the influence of the transition to self-administration on military questions or the recruitment and training of African officers.

Throughout the immediate post-war years France continued to view Africa as an important element of its overall military programme.

Speakers in the National and French Union assemblies repeatedly asked for a re-orientation of the French defence policy on the basis of an Euro-African strategy.[36] But this recognition of the geo-political importance of Africa was not translated in any preferential financial treatment for the African regiments. On the contrary, because of the two colonial wars, priority for equipment, facilities and training was given to those units which bore the main burden of the fighting and not to those units which stood guard duties in and around the French territories. It was accepted that African troops no longer had the military value they had had in the days of Mangin. Nor could they be used extensively in colonial conflicts because of the repercussions that such a decision might have on territorial politics.[37] The decision to use African soldiers in Indo-China, Algeria and during the Suez intervention encountered strong opposition from several French political parties, particularly the Rassemblement du Peuple Francais which attempted unsuccessfully to rally the verterans organizations to its cause. As long as the African territories were an integral part of Greater France there was no financial distinction made between an African and a non-African regiment, except on the basis of its military usefulness.

The general lack of interest of French and British military authorities in the fate of their African regiments had grave consequences for the organizational capabilities of the African military forces. Without financial support from the mother country, African regiments could not increase their strength or modernize their equip-

ment and base facilities. Nor could they acquire new types of armaments or launch new training programmes. With a few exceptions plans for the creation of African naval and air forces were postponed indefinitely.

In the Federation of Nyasaland and Rhodesia the fighting strength of the regular forces was cut by 25 per cent between 1950 and 1957 for financial reasons. In the annual reports of the Federation's Department of Defence, a lack of funds was held responsible for shortage in personnel, equipment and armaments (Rhodesia and Nyasaland, 1957). In Nigeria a ten-year programme to provide the army with better accommodation was shelved in 1954 because of a lack of funds. The police forces on the other hand, were provided with new accomodations and new training facilities, a fact which was not well received by military officers.

In the British territories, the lack of funds complicated the military's task of adapting to the new political conditions created by the process of constitutional change. African military forces could not offer attractive financial or material conditions to potential African recruits; nor could they adequately meet the rising financial demands of those few African officers and N.C.O.'s already in the army. As Table III shows not only were there major differences between the pay of British and African officers, but these differences increased as one rose in the military hierarchy.[38] Such blatant discrimination was unlikely to attract the best graduates from the secondary schools to the army.

TABLE III

DAILY PAY FOR EUROPEAN AND AFRICAN OFFICERS IN THE GHANAIAN REGIMENT IN 1954 (IN GHANAIAN SHILLINGS)

Rank	British	African
Second Lieutenant		
Basic pay	19.6	18.0
Marriage allowance	18.6	13.0
Local allowance	4.6	
Overseas allowance	19.6	
Total	62.0	31.6
Lieutenant		
Basic Pay	19.6	18.0
Marriage allowance	18.6	13.6
Local allowance	4.6	
Overseas allowance	19.6	
Accommodation allowance	9.0	
Total	71.0	31.6
Major*		
Total	103.6	43.6

Source: Gold Coast, Legislative Assembly Debates, March 11, 1954.

* Figures for the components of majors' pay are not available.

The difference between military and civil service rates of pay constituted an addtional deterrent. While the basic pay for a Ghanain major was set at 420 pounds a year, an African university graduate entering the civil service in a comparable position received close to 700 pounds a year. Similar discrimination existed in military pensions. Until 1954, there were no provisions for a pension to be paid in the case of disabilities which had occurred after 1945, nor were there any pensions for those who had spent 15 or 20 years in the service but had not served in a war. In addition, since all pensions were calculated on the basis of the salary scale, they naturally reflected its inequities. Only in 1958, two years before independance, did Nigeria revise its military pension scheme so that Africans who had received a regular commission after a short-service commission would no longer loose the benefits of their previous service in the ranks.

It is therefore not surprising that the Africanization of the officer corps was a slow process. The British behaved as if they had all the time in the world before commissioning African officers. In Ghana, an Africanization policy for the civil service was officially introduced in 1946, but its terms of reference explicitly excluded the military. In Nigeria, the Nigerianization Commission appointed in 1948, although not concerned directly with the armed forces, laid down three principles on Nigerianization which were used as guide lines by army officers. These were that there should be no lowering of the standards for entry and advancement within the force; no favours granted to Nigerians in terms of promotion; and no recruitment of a European when equally competent Nigerian was available.

In reality these principles simply meant an indefinite postponement of any effective Nigerianization of the Officer Corps. Until the middle of the 1950's, the military Nigerianization policy was limited to a statement of intent, repeated in every annual report of the colony, to the effect that "every effort was being made to provide an increasing number of African officers (Great Britain, 1954b, p. 123)."

Concrete plans which could have accelerated the Africanization of the armed forces were repeatedly turned down by a coalition of Nationalist Leaders, cost-conscious colonial administrators and unconcerned expatriate officers. For example, a proposal to set up a West African military academy was turned down on the grounds that such an academy would be too expensive and that the officers trained there would not have the prestige of those trained within the British Army and holding a King's Commission. Instead, the territorial governments asked for and were given a number of places each year at the Mons and Eaton Hall Cadet Schools and later at Sandhurst Military Academy for the training of West-African cadets.[39]

But to reach Sandhurst and eventually obtain a regular commission the African secondary school graduate had to pass the following hurdles: a difficult general written examination; a medical test; an interview at army headquarters; a six-month recruit course at the Teshie Military School; a final selection board at Teshie; a course at the officer cadet school at Eaton Hall; a regular commissions selection board; and finally an officer course at Sandhurst (Minens, 1971, p. 35).

As pointed out by Miners (1971) and Luckham (1969) none of these hurdles constituted a mere formality. In 1956 only two out of nine Nigerian candidates managed to reach Eaton Hall.[40] In fact, the rules of entry were so stringent that by 1954, there were only 11 Ghanaian commissioned officers in the Ghanaian Regiment of the W.A.F.F. In Nigeria only 18 African officers were commissioned during the 1945-55 period. Of these 18, four resigned their commissions so that by 1956 there were only 14 African officers in the Nigerian regiment as compared to more than 250 expatriate officers.

In the British territories, expatriate officers felt they had all the time in the world before turning over the colonial regiments to African officers, but French officers in the French Colonial Army were, for the most part, reluctant to even consider Africanization of the Officer Corps as a valid goal for the distant future. Better training facilities for officer candidates were established after World War II but they were of little benefit to Africans who, since they enjoyed no priority in recuitment, could rarely qualify to attend these schools.[41] In 1948, only six of the 321 commissioned officers stationed in French Equatorial Africa were Africans. Only in 1956 were plans announced for the establishment of a new military school, the Ecole du Général Leclerc, for the specific purpose of training African officers. A second school, the Ecole des Forces Armées des Territoires d'Outremer, was established shortly after to provide African N.C.Os with officer training. In addition, special military schools were open to

provide children, especially those from "military families", with a general and technical education to equip them for eventual military service.

By 1956 crash programmes were training 20 to 25 lieutenants a year so that by the time of independance there were four African colonels, six majors and 157 lieutenants in the French army. Clearly this constituted a marked improvement over the 1950 situation when there was only one colonel, three majors and 50 lieutenants of African origin in the entire French army. However, although more impressive than the British efforts, this trend had very little to do with a desire to train African officers in preparation for the transfer of military responsibility when independance was granted. The idea was simply to train more African officers so that French officers could be transferred from Tropical Africa to the battlefields of North Africa. Certain French political leaders, notably Minister Cailleret, saw in a better trained African Force the prototype of a counter-liberation-front organized on the basis of local social structures:

> Il est indispensable que dans chaque cellule sociale, (village, tribu, grande famille par exemple) existe un noyau militaire dont le rôle en tout temps serait double: surveiller, grâce aux multiples connexions entretenues avec la collectivité civile, la vie intime de cette collectivité et renseigner l'autorité; intervenir sans délai à l'échelon local le plus bas contre les fauteurs de troubles pour les neutraliser ou les disqualifier (Ly, 1957, p. 53).

As the date for independance came closer, measures to increase the number of African officers were also introduced in the British territories. In 1956 it was agreed to lower some of the education standards

for entrance at the cadet school and to lower the age limit for entrance at Sandhurst from 23 to 19 years. But these measures had little immediate impact since they were so few candidates for officer training available. In 1958, the Nigerian Federal Prime Minister, Abubakar Tafawa Balewa, had to confess to the failure of their military recruitment policy in the House of Representatives:

> It is true that we were allocated many places in Sandhurst and Eaton Hall, but unfortunately, because our men are not willing to come forward in large numbers we could not train more than what we are training now (Nigeria, House of Representatives Debates, March 3, 1958).

A similar situation existed in Kenya. In 1960, seven places were set aside at Sandhurst for Kenyan cadets but only five of them could be filled. Speaking in 1960 the Legislative Council the Kenyan Minister of Defence appeared almost resigned to the situation:

> We do our best, Sir, but the response, I must admit, is not exactly overwhelming. Every year, Sir, we circularize all secondary schools and ask for candidates; and my officers visit these schools and give full details. Last year, Sir, 24 Africans applied for the Sandhurst course this year. Thirteen of them, unfortunately, failed to reach the requisite educational qualifications. Now -- and this is the sad point, Sir -- of the 11 remaining only three turned up for their interview by the selection board. That I do find, Sir, very depressing and very disturbing. The selection board, Sir, I may say, is headed by the chairman of the Civil Service Commission and we also this year, Sir, had the benefit of the experience of a former instructor at Sandhurst. I am afraid, Sir, the fact is that at the moment other careers appear to be more attractive (Kenya, Legislative Council Debates, June 2, 1960).

To remedy this situation the government instituted a Junior Leaders Training Centre at Kahawa where boys with an insufficient educational

level were trained specifically for eventual entrance to Sandhurst.

In British East Africa the situation was made even more complex by the presence of large European minorities who were not particularly enthusiastic about the idea of training African officers, especially after the Mau-Mau rebellion. In the Central Africa Federation, for example, no African was commissioned until 1963.[42]

Among all the reasons why high school graduates did not choose the army as a career, the most important was that the army was not very popular with the African population. The military, after all, was the symbol and often the instrument of European domination. In times of nationalist agitation this image was unlikely to attract high school graduates, many of whom were already engaged in political activities. As recalled by Major Eze, one of the few Nigerian to have received a commission after a course at Sandhurst, the army was seen by his high school graduating class as "a place for the illiterates and criminals whose duties were to kill and be generally brutal (Miners, 1971, p. 30)." Officer training was perceived, quite correctly it might be added, as a period "of polishing, washing, starching and pressing. General cleaning, fatigues . . . and general chasing around by non-commissioned officer (Miners, 1971, p. 12)." Compared to this prospect, a job in the civil service offered the possibility of rapid promotion, a high social status, a car allowance and the prestige conferred by the degree.

Nor was any effort made by military or political leaders, both

African and European, to alter either the conditions or the image in which they themselves believed. For them the important consideration was the preservation of the army's professional standards, not the rapid Africanization of the officer corps. As one Gold Coast government official put it in 1952:

> it is not intended that high standards of efficiency of the army should be reduced for the sake of pursuing this policy precipitately. It is the Government's policy to train African officers and N.C.Os up to the highest standards (Gold Coast, Legislative Assembly Debates, Oct. 13, 1952).

The few cadets selected for officer training at Sandhurst were chosen not so much for the purpose of a rapid Africanization of the officer corps but "to do the Gold Coast credit and by their conduct and bearing demonstrate that our progress towards self-government is built on firm foundations (Gold Coast, Legislative Assembly Debates, Feb. 11, 1954)." In their recruitment campaigns European officers stressed elements which meant little to recent high school graduates: the long British military tradition, the camaraderie existing between fellow officers, the dangers of army life, the contact with nature and the honour of serving their country and their King.

There were few reasons for either expatriate officers and nationalist leaders to accelerate the Africanization of the officer corps. There was no shortage of expatriate officers willing to serve in the colonies. The territorial governments were only paying a part, 50 per cent in the case of Nigeria, of the cost of the armed forces. The additional costs entailed by a policy of active Africanization

would undoubtedly have been passed on to the local level, a prospect which was not well received by territorial governments.

Therefore, even if the colonial policies of France and England were widely divergent both resulted in stagnation for the African regiments. In the case of Britain, this was the result of the decision to turn over responsibility for these regiments to the territorial governments, who saw little reason to support them financially. In the case of France, any concern for the African regiments was lost in the process of military centralization or in preoccupation with the Indo-Chinese and Algerian conflicts. The African regiments had seen a period of organizational growth, as part of the pre-1920 European military strategy, which needed massive numbers of men and support bases throughout the continents. With the appearance of atomic weapons, the shrinking of British colonial power and France's involvement in two colonial wars, the situation and the resulting strategy both changed. African regiments and African military bases no longer constituted key elements in French or British military policy.[43]

Although they had become of little strategic importance, African colonial troops continued to be used on law-and-order missions during the 1945-60 period. In Dahomey the intervention of the military during labour conflicts in 1958 marked the beginning of a long period of animosity between organized labour and the military. In February 1955, the Sierra Leone contingent of the W.A.F.F. was used to crush a demonstration by strikers and 17 civilians were killed in the operation.

In Kenya, in additon to the "Mau-Mau emergency", the Kenya African Rifles were dispatched to Zanzibar to assist the police during the 1961 elections and 101 persons were killed during this operation. The armed forces in Nigeria were put on a stand-by basis during the riots of 1952, the Eastern Nigeria riots over taxation in 1953 and the Ibadan riot of 1958. In all three cases the police forces handled the situation without the army's help. Two Nigerian battalions were sent to the Gold Coast in 1948 for two months to reinforce the police forces faced with mounting rioting. This increasing involvement with law-and-order missions did not increase the armies' popularity with the Nationalist leaders or with the African population.[44]

In addition to their problems of organizational stagnation, slow Africanization and decreased popularity, the African regiments were also completely isolated from the changes taking place in their immediate political environment. While in most sector organizations and groups were preparing for independance, the military did not concern themselves with this evolution until the very last moment.

In the British colonies, the responsibility for defence and the armed forces was always the last aspect of power to be transferred first from London to Africa and then from the regional to the territorial political authorities. Only on the eve of complete independence was this authority transferred from the hands of the local colonial authorities to the elected African representatives. Examples of this process are numerous.

The ministerial system was introduced in Uganda in 1955 but without any mention of a defence portfolio. The Governor continued to exert exclusive control over all military activities. The Uganda Constitutional Conference of 1961, the last step before the granting of full independence, confirmed the "special" responsibility of the Governor over external affairs, defence, military forces and internal security as well as his operational control of the police force (Great Britain, 1961)."

The 1951 constitution in Ghana provided for the appointment of a Minister of Defence and External Affairs to serve as an ex-officio member of the Executive Council. In 1954 when a new constitution was introduced providing for a Cabinet fully responsible for internal matters, the responsibility for external affairs, defence and police remained exclusively in the hands of the Governor.[45] Only in 1955 were preliminary arrangements made by the territorial government for the establishment, at independance, of ministries of External Affairs and Defence. Although the estimates for 1955-56 included a small amount for the selection and training of officers of the future External Affairs ministry, no mention was made of any programme for the formation of Ghanaian general officers for the future Ghanaian Army. Only in 1956 was an agreement signed to replace the West African Command by local military commands in the Gold Coast, Nigeria, Sierra Leone and Gambia.[46] According to this agreement administrative and financial control of the Gold Coast was given to the Governor and not to the elected executive or Legislative Assembly.

The Constitutional Conference of 1962 in Kenya discussed the armed forces very briefly under the heading "law and order" and in conjunction with police matters. It was decided that the "central government would be responsible for the Armed Forces and the ultimate sanction of Law and Order (Great Britain, 1962)."[47] Following this conference the Council of Ministers was expanded to 16 members including one appointed official responsible for defence matters. The 1963 Constitutional Conference, the last hurdle before independance, did not even consider defence and military related matters (Great Britain, 1963). It was understood that the Governor alone retained responsibility over defence, military and foreign affairs so as to "give the constitution a chance to work, and time for the new Kenya Government to solve the many internal problems before embarking on ventures outside its capabilities (Macphee, 1968, p. 170)."

Responsibility for the colonial armed forces had always constituted a complicated puzzle in the French colonies. After 1945 the Minister of National Defence was made responsible for the general orientation of all French colonial forces.[48] His directives were transmitted to the Minister for Overseas France who in turn transmitted them to the territorial High Commissioners. At the territorial level, the directives were first discussed by the commissioner's military Cabinet and finally referred to the local Commanding Officer. In the areas of planning and supervision, the secretaries of State for the Navy and Air Force were made responsible for the navy and air force while the minister for Overseas France was given a similar responsibility over the army. Finally, all reinforcements for any service had to be

approved by the War Ministry. This administrative jungle was made even more confusing by personal and partisan rivalries and by the rapid turnover of ministers, who, according to one observer, seemed to be engaged in a game of musical chair (Chantebout, 1967, p. 133) However, one policy remained unchanged. Until 1958, all questions regarding the colonial forces were discussed and acted upon within the overall structure of French military and colonial administration.

In 1958, the French Community replaced the French Union as the political structure for overseas France. It confirmed the distinction, first introduced with the 1956 Loi-Cadre, between territorial and community responsibilities. Each territory was provided with a Governing Council where the Governor and elected members met to discuss territorial questions. Defence policy remained the responsibility of the entire French community whose major spokesman and representative was the President of the French Republic. In practice this meant that almost no military decentralization took place in the French colonies until full independance was achieved.

Most African nationalist leaders were not particularly anxious to put an end to this exclusive control over military and defence matters, since to do so would have required them to take over full financial responsibility for the military forces. In the French territories the cost of the armed forces was still borne entirely by the French budget. In the British territories, the local governments paid directly only for small items such as cadet units in secondary schools, junior training schools and the training of African officers in British mili-

tary schools. Some nationalist leaders saw little reason for the Government to support even a small military force. As one member of the Gold Coast Legislative Council put it as early as 1952:

> This country is heading towards self-government within the Commonwealth and I think the British Commonwealth is strong enough to protect the Gold Coast (Gold Coast, Legislative Assembly Debates, Oct. 6, 1952).

African nationalist leaders also showed little zeal for Africanizing the officer corps or in bringing the salaries of African soldiers up to par with those of expatriate soldiers. If pressed to justify the different rates of pay between African and expatriate soldiers, elected African representatives invariably referred to budgetary restrictions or to different standards of living. As one Gold Coast spokesman put it:

> British soldiers receive rates of pay and allowances based on conditions in the United Kingdom, whereas African soldiers are paid at rates based on local conditions and related to Gold Coast Civil Service Scale (Gold Coast, Legislative Assembly Debates, Nov. 18, 1955).

Repeatedly nationalist leaders used the excuse that they were not yet fully responsible for the military and as such could do little more than to "sympathize very much with my African brothers in the Force as to the disparity in the rates of pay". Of course, they asserted, with independance "this wise and progressive African government will see its way clear to rectify this anomaly of which we are all aware (Gold Coast, Legislative Assembly Debates, May 17, 1956)."

Few voices were raised to challenge these policies. Busia in 1953, then a member of the Gold Coast Legislative Assembly, criticized

Nkrumah's government for failing to see the link between Africanization of the officer corps and self-government:

> The C.P.P. Government has not planned for self-government in 1953 or 1954 with regard to Defence; how many officers have we in the Army? What has the Government done to see to it that we bear the greater proportion of the cost of our defence, and provide the greater proportion of the officers and men. A self-governing country must not depend too much on other countries for this defence. There is no proof that the C.P.P. Government has done anything about this problem (Gold Coast, Legislative Assembly Debates, May 17, 1955).

In a debate on the Nigerian Armed Forces in 1955 Chief Akintola expressed his discontent at the lack of government control over military matters because of budgetary restrictions:

> If it is only one million pounds that we can provide let that one million pounds be spent on a Nigerian Army over which we shall have control . . . Let us have an army of two men, but let this appear in our Estimates that this is the nucleus of the Nigerian Army (Nigeria, House of Representatives Debates, March 21, 1955). 50

However, these were two exceptions. Generally there was little or no debate in the territorial assemblies on military matters. In the Gold Coast a few written questions were asked in 1952 and a short debate occurred in 1954 at the time of the Military Pensions Bill. Only in 1957, a few months before independance, was there a lengthy debate on the future role of the armed forces. In Sierra Leone, Gambia and Nigeria, there was no parliamentary debate on the military. In Kenya, because of the Mau-Mau uprising, there was little information or discussion as to the use of the armed forces. Only in 1960 did the first lengthy debate on the military take place in the Legislative Council.

In the French territories minutes of discussions in the local territorial councils show little concern for military matters, which remained a prérogative of the metropolitan government.[51]

The few debates which did take place served mainly as pretexts for attacking the government's social and economic policies. As stated by Johns (1964) with regard to East Africa, to raise a question related to defence was often the only way to obtain a debate on the wider issue of inter-territorial cooperation. For example, in the Gold Coast the creation of an Armed Forces Council in February 1957 sparked a lively three-day debate on the prerequisites for democracy, the attempts of the government to by-pass and downgrade the country's Parliamentary institutions and eventually to install a dictatorship.[52]

The indifference of African nationalist leaders toward military matters was often motivated by political considerations. In Nigeria, political leaders from the Northern Region succeeded in delaying Africanization so that qualified northern cadets could be recruited and trained to replace expatriate officers. In the eyes of Northern politicians, British officers presented less of a threat than Nigerian officers from the Eastern or Western regions. African nationalist leaders also generally were wary of being too closely identified with any control of the armed forces, which still symbolized the colonial presence in all its most domineering aspects.

As a rule the military were also held in low esteem by nationalist leaders. For Mboya the armed forces "always seem to be working on plans which politics had made outdated by several years (1963, p. 241)." In the Nigerian House of Representatives, Chief Akintola asked the government to move the army barracks out of Lagos since "the proximity of some of these army headquarters to the areas where civilians live is most embarassing to us (Nigeria, House of Representatives Debates, March 21, 1955)."

The local military authorities made few efforts to improve their image or to inform the nationalist leaders as to the nature and role of a modern army. For example, in 1962, Odinga, an opposition member of the Kenya Legislative Council, admitted his ignorance:

> Mr. Speaker, when I come to the reply of the Minister for Defence, I would say that I am most grateful for the informative reply which he made . . . His charge of my being ignorant reminded me that he is still to be blamed, because he introduced the cadet corps in the school at which I was taught . . . I want actually to make him understand that my ignorance of the army is not my own fault. It is the fault of the system which actually brought me up, and that still refers to the Colonial system which was here (Kenya, Legislative Council Debates, March 21, 1955). 53

Relationship between local political representatives and military authorities were often strained. According to Apaloo, senior European officers of the Ghanaian regiment had not only refused to forward complaints from African soldiers to higher authorities, they had also prevented soldiers and members of the Council "from taking action other than submitting representations through the proper

channels (Gold Coast, Legislative Council Debates, February 2, 1957)." Even if a local political leader intervened to plead the case of African soldiers or veterans he had no success.[54]

No mention has been made of the position of the armed forces in the Belgian colonies of the Congo and Ruanda-Urundi during this period. For the Belgian military authorities troops raised in the colonies were no different from troops raised in Belgium. According to a senior Belgian officer both armies were in fact one:

> Les unes et les autres sont pétries de la même substance animées du même idéal. Elles échangent régulièrement leurs cadres. Elles ont les mêmes traditions militaires. Elles servent la même cause (DeLattre, 1953, p. 5).

Colonel Janssens, the last commander of the Force Publique, claimed that the concept of Africanization of the officer corps was "invented" in 1955. Before that time "no political leaders or African soldiers had even thought of it (Janssens, 1961, p. 31)." In his view morale and indoctrination were far more important than Africanization:

> Mais, plus que l'Africanisation des cadres, il était important de maintenir et d'améliorer encore le moral de la troupe. Tous les moyens étaient mis en oeuvre à cet effet: service d'éducation, presse, radio, action sociale, surveillance par la branche G2, officiers de renseignement, inspection (Janssens, 1961, p. 53).

However, under pressures from the Belgian political authorities, a plan was introduced in 1955 for the rapid training of African officers. This policy, like so many of the Belgian colonial policies, tried to solve an urgent problem by initiating change at the furthest possible point. In this case five primary schools and one secondary

school were established to prepare Congolese children for eventual military careers.

In 1957, a test was organized for African recruits to enter the Ecole Royale Militaire of Brussels, after only three years of preparatory schooling instead of the required seven. Colonel Janssens supervised the competition; no recruit successfully completed the examination.

As the Congo approached the date set for independence, two additional training schools were opened so that African N.C.Os could receive officer training. Over a two-year period only 27 students were enrolled in these special schools and by the time independence came there were still only ten African adjudants among the 26,400 members of the Force Publique. Of these ten, two eventually rose to become generals (Mulamba et Bobongo) and four to become colonels.[55]

The local military authorities tended to see Congolese independence as the most serious threat ever faced by the Force Publique.[56] By 1955 this threat was to be added to the growing problems encountered in the training of those "recruits coming from the cities who do not easily accept the rigor of military discipline (Belgique, 1951, p. 57)." As independence became inevitable the Force Publique became a useful instrument to eliminate undesirable Congolese nationalist leaders while protecting the interests of the Force and at the same time Janssens' own position. As he later wrote:

> Mon idée était de proposer que l'on profite de l'incartade de Lumumba et de Kashamura pour les démettre de leurs fonctions de membres du collège exécutif général pour élargir le collège, afin de le faire ressembler davantage à un gouvernement et aussi afin de compenser la hargne des deux évincés par l'enthousiasme des dix remplacants, pour - enfin - ordonner l'état d'exception dans la Province Orientale avec moi comme commissaire général (Janssens, 1961, p. 180).

As independence grew nearer the Force was increasingly used on law-and-order missions, mainly to break up political assemblies. At the same time, the number of civic action projects on which the Force was engaged diminished to a low of two in 1958 as against seven, six years earlier.

The 1945-58 period was a difficult one for the colonial military forces of the British, French and, to a lesser degree, Belgian colonial territories. On the surface nothing changed very much, a fact which has led many observers to conclude that the colonial regiments remained as modern and strong as the European armies on which they were modelled. A number of military sociologists have confused the effectiveness of the military as an agent for the modernization of individuals with its definition as a modern organization.

For individual members, the African army, like the armies of all developing nations has often served as a priviledged instrument of modernization. Pye points out that the incorporation of a recruit into the army necessarily involves "a movement out of the particularistic relationships of traditional life and into the more impersonal and universalistic relationships of an industrialized society (Pye, 1966, p. 180)." In addition, this process is seen as creating an ethnic melting pot encouraging ethnic tolerance and collaboration.

Finally, military life is said to include elements of political education and citizenship training which facilitate the recruit's reintegration into civilian society. To some degree African colonial armies during the 1880-1958 period have followed this idealized pattern of individual modernization. However, its impact on individuals should not be exaggerated. Although they have fulfilled some remedial educational functions, African colonial armies have concentrated primarily on the transmission of the minimum technical knowledge necessary for efficient operation as war-machine or supplementary police force. In the name of professionalism, colonial military planners have successfully resisted all attempts to transform colonial African regiments into vocational training schools.[58] Similarly doubts have been expressed as to whether the individual modernity achieved through the type of social and political quarantine which is characteristic of army life can be compared with modernization achieved through urbanization and industrialization (Little, 1965; Wallerstein, 1963). The experiences of World War I and World War II veterans would seem to support this contention. For example, Schleh (1967) shows that after demobilization only a minority of veterans opted for the modern economic sector.[59]

Looking at the African colonial military regiments not as agents of individual modernization but as organizations, the extent to which they can be considered modern, professional organizations is doubtful. According to military sociologists (Janowitz, 1964; Huntington, 1957; Van Doorn, 1964), a professional military force possesses six elements through which it is identified

as a modern organization. First, such forces are the result of explicit planning, meaning that they are "organized with a view to efficient functioning of their members in pursuit of relatively well understood ends (Levy, 1966, p.576)." Second, because they rely for their recruitment on universal criteria, they draw together the best talents available in the general population. Third, explicit planning and universal recruitment lead inevitably to increased specialization and a rational structure within the army itself. Fourth, because armies are free from any day-to-day test of their efficiency, they can concentrate fully on the improvement of this rationality. Fifth, armies have an insatiable and self-generating desire for optimal modernization. Finally, it is suggested that armies, because of their immersion in modernity and their isolation, will necessarily become breeding grounds for radical thinking and action which in turn will increase the collective appetite of the organization for further modernization.

Until World War II and only to a certain extent, the African colonial armies have been faithful to this ideal. They were explicitly planned by the colonial authorities. Because they were to be used, at least in the French case, in conjunction with European troops, they had to be modelled along similar lines to facilitate this eventual integration. To the extent that European military forces were modern organizations so to some extent at least, were the colonial regiments. But when other elements are considered, the African

colonial regiments do not appear as modern organizations. Recruitment was far from universal. Following the principle that it was more effective "to educate a fighting man than to militarize a soft ex-school boy (Gutteridge, 1964, p. 75)", colonial recruiters came to rely preferably on illiterate, isolated, muslem and martial tribes for their recruits. Such qualities, it was felt, would insure the loyalty and obedience of the African soldiers. However, the system also resulted in a serious ethnic imbalance and in a low educational standard among the recruits. In Nigeria, between 1946 and 1958, 63 per cent of the African soldiers came from the northern region (Miners, 1969); in Ghana, 60 per cent came from the northern half of the country or from neighbouring Upper Volta and Niger. In Sierra Leone, Kenya and Uganda, the recruitment policy thus led to a predominance of Mende, Kamba and Acholi soldiers in the armed forces. Also, because of budget restrictions and the low esteem with which they were viewed by nationalist leaders, the African regiments could not modernize their equipment and adapt to changing conditions, particularly by the Africanization of their officer corps. Thus, the apparent modernity and strength of the African colonial military organizations is in reality deceptive. In the end, what characterized the African colonial regiment as modern was not so much its explicit planning or its educational function, but its integration within a modern oriented colonial framework. Because they were indispensible to the colonial authorities, the African

regiments had to be modernized and they therefore benefited from a spill-over of the prestige and modernity of the colonial administration. In many ways, the colonial African army was a modern organization in spite, not because, of its African members.

This spill-over only served to mask the continuous deterioration of the exchange process between African military organizations and their environment. First, the goals of the African armies became increasingly intangible as it became more difficult to identify the nature of the "intangible something" produced by them. African armies were no longer needed to fight European wars. Their use in African conflicts was almost nil because of the generally peaceful nature of the struggle for independence. Their use in colonial wars (Algeria, Indo-China, Cyprus, Palestine) was made difficult by the political rather than the military nature of such conflicts. Finally, police forces could easily replace them on law-and-order missions. In short, they had little to do except to stand as a last symbol of the colonial presence.

Second, because of their role as symbols rather than as active agents of the colonial oppression, African armies did not face open attacks on their legitimacy. Few people paid any attention to them one way or the other. Nationalist leaders had only contempt for the military organizations run by expatriate officers and with so few roots in the African tradition. On the other hand, because their struggle was mostly a political and constitutional one, they had little

need to infiltrate the armies or control them financially. With little to do and no role to play in the independence struggle, African armies were absent from those events which were already shaping their future environment. They did not develop any of the special skills and sub-structures necessary to interpret this increasingly dynamic and complex environment. The boundaries of the African military organizations remained intact and rigid throughout this period but only at the cost of an increased estrangement from the surrounding political reality.

Third, as their product became more intangible, African armies were confronted with serious shortages of political support and financial resources. There was little incentive for the colonial military authorities or the territorial governments to pay any special attention to their needs. As a result, the organizational capabilities of the African armies were allowed to deteriorate. Plans for expansion and programmes for new training facilities and for new equipment were shelved. The improvement of service conditions for African soldiers progressed at a slow pace while the Africanization of the officer corps was not recognized as an immediate priority.

By the end of the 1950s, the image of the African army as a powerful and modern force no longer corresponded to reality although it was still largely held by the population and the nationalist leaders. This image was not immediately affected by the termination of colonial rule. Defence treaties, training agreements and the presence of

a European officer corps meant that the African army could continue to benefit from its earlier image as the powerful and modern arm of the colonial authority.

The Transformation into National Armies, 1958-63

For African armies the transition from colonialism to independence was achieved without difficulty. Within a few months, or even a few weeks, an organization previously exclusively under the control of the regional colonial authorities was reorganized on national territorial lines.

In Uganda, the national army was created by transforming the Fourth Battalion of the King's African Rifles (K.A.R.) into the First Battalion of the Uganda Rifles. In Tanganyika, two battalions of the K.A.R. were transferred to the new government and became the First and Second Battalions of the Tanganyika Rifles.

New armies were established in British West Africa shortly before the official date for independence by dividing up the various regiments of the West African Frontier Force (W.A.F.F.) according to their origin. Thus the Sierra Leone regiment of the W.A.F.F. became the Sierra Leone Army, the Ghanaian Contingent the Ghanaian Army, and so on. National armies were often not created in the French territories until some months after the official transfer of power. Thus the Ivory Coast which became officialy independent in November 1960, did not establish a national

army until July 4, 1961 when the first conscripts were incorporated and the first reserve N.C.Os recalled on active duty. One month later a battalion of Ivory Coast soldiers, including their officers and equipment, who had been serving in the French army was transferred to the new national army. The repatriation of the last Senegalese soldiers serving with the French army in Algeria was completed only in November 1961, a year after independence while in the Central African Republic the first company of the First Battalion of the new army became operational only in November 1962 (République Centre Africaine, 1961).

The constitutions of these new independent states reflect the almost casual manner with which questions of defence were treated. With striking uniformity, in the tradition of the Fifth Republic, the constitutions of the states formerly under French rule emphasize that the President was to be head of the armed forces and as such preside over the High Military Council; the President had sole responsibility for selecting the senior military officials; the status of the military forces could only be modified by a law passed in the National Assembly, not by executive decree; and while a state of war could be declared only by the National Assembly, the Council of Ministers could declare a state of national emergency. Only in Senegal and French Cameroon were National Defence councils written into the constitution. In the former British colonies statements on military forces in the

constitutional documents only included a brief reference that defence and military matters were a responsibility of the central government.

This apparent facility with which African military forces shifted from colonial to national status is deceptive. The change was only trouble-free because the politicians and the army officers, who were mainly expatriates, were not anxious to develop close contact with each other, nor was there any need or occasion for such contacts to develop. Both groups expected little change in the traditional pattern of mutual exclusion during the post-independence period. Thus when General Alexander took over the new Ghanaian Armed Forces, he could conclude with relief that "there was no trace of politics influencing this sphere (Alexander, 1965, p. 5)." He could see no reason why this mutual exclusion could not continue. Commenting on the possible impact that independence might have on the future of the Force Publique, General Janssens made it clear that he expected things to be much the same.

> Il faut que la Force Publique seule force disponible, reste intacte. Elle doit donc passer en bloc au service du gouvernement congolais avec ses cadres, sa discipline, sa hiérarchie unique et surtout avec un moral intact (Courrier Africain, 48, (1965), p. 1).[60]

The Nigerian Chief Obafemi Awolowo was typical of the majority of the new leaders in his attitude to the newly-acquired armies:

> In the interest of our people, we must never cast as much as a glance in the direction of power politics. In this nuclear, rocket, and dollar-dominated world, we have no ghost of a chance of making any mark at all in this field . . . our defence policy should aim at doing no more and no less than maintaining and modernizing the Queen's Own Nigeria Regiment in its present size and strength. There has been a great clamour in recent times for the enlargement of our army and navy (such as we have), and for the establishment of a strong air force. Whom are we arming against: ourselves or our neighbours . . ? We must not set up to build up these forces for mere national aggrandisement, or as an instrument for maintaining a totalitarian regime in Nigeria . . . Any government that does not enjoy the goodwill of the people should resign: it must not utilize the people's money for the purpose both of their enslavement and starvation (Awolowo, 1960, pp. 306-7).

Julius Nyerere, the new Prime Minister of Tanganyika, suggested doing away completely with national armies and replacing them with an all-African military command or United Nations contingents (Nyerere, 1961, p. 7). Part of this indifference was caused by these leaders' interpretation of the international climate and their view of their own foreign policies. Not only was foreign policy considered to be of secondary importance but it was also judged to be entirely dependent on domestic politics. In one of his first stage visits President Olympio of Togo expressed his disinterest in international politics:

> Tout en ne se désintéressant pas de la politique extérieure, les Etats Africains doivent à l'heure actuelle mobiliser la majeure partie de leurs forces pour leur propre développement (Chronologie Politique Africaine, Oct. 2, 1962).[61]

In addition, few African countries foresaw any serious difficulty in the field of foreign affairs due to the favourable international climate in which independence was achieved.[62] Border or ideological difficulties were not expected to escalate to a level where the use of force might become necessary. Except for Madagascar and Gabon, most African countries made clear their decision to avoid becoming embroiled in the East-West conflict.[63] Furthermore, since they felt responsibility for internal security could be entrusted to special units of the national police force or local police units, no internal role was foreseen for the army.

However, mainly for reasons of personal prestige and national pride, the new national leaders soon abandoned this attitude of benign neglect and concerned themselves with at least one aspect of the new national military forces: the Africanization of their officer corps. Their ignorance of the circuitous "military" way of doing things led them to offer more straightforward solutions to the problem. For example, in Nigeria, a Commission for Nigerization suggested that the slow pace of military Africanization was due to the unsuccessful attempts in the past to recruit young men with full secondary education. Also, the lack of training for enlisted or non-enlisted men or boys as potential officers aggravated the problem. To remedy this situation a host of measures were suggested. First, it was proposed that less effort be spent on trying to recruit highly educated men. Instead special attention should be given to Nigerian N.C.Os "who though not highly educated have sufficient qualities of leadership to make them good officers (Nigeria, 1959, p.36)." To favour the

promotion of N.C.Os political leaders recommended that a certain percentage of the subaltern commissioned ranks be set aside for Nigerians. Second, it was proposed to Africanize entire units at a time instead of relying on individual promotions. It was felt that this system would provide the military with an opportunity to judge the extent to which an all Nigerian army would show loyalty and confidence in its Nigerian commanders. British trainers could then discover and adjust any factors which would tend to breed unpopularity before leaving the army in the hands of the Nigerians.

Finally the Commission for Nigerianization recommended that other avenues of training in addition to Sandhurst be considered, such as using facilities in other Commonwealth or friendly countries. If all these solutions were applied, the Commission felt it would be "possible to Nigerianize our armed forces completely, without necessarily lowering standards or morale (Nigeria, 1959, p. 36)."

The reaction of the Nigerian general staff to these recommendations was negative. First, the proposals were viewed as a political invasion of purely military matters. More important, they were also seen as impractical and detrimental to the Nigerian armed forces. They could be implemented only through a rapid expansion of the size of the army. For this, compulsory military service would have to be introduced which, in the eyes of the military, would make it even more difficult to maintain a high quality in military personnel.[64] The

idea of Nigerianization of total units was particularly repellant to Nigerian officers since it would interfere with the careers of individual officers by blocking their chance of regular commissions. Finally, the suggestion to look outside of Britain for officer-training was considered dangerous since it would introduce variations in the training of officers.

Ultimately, however, the views of the political leaders, particularly in Ghana, Sierra Leone and Nigeria, prevailed. Qualifications for officership were reduced while salaries and car allowances were increased. Promotions, especially in the higher echelons, were accelerated to make room for the new African officers. In Nigeria for example, the percentage of Africans in the officer corps went from 17 to 89 per cent within a four year period (1960-64).

The military was only successful in the former Belgian Congo in resisting, for some time at least, the pressure for rapid Africanization of the officer corps. As a gesture General Janssens agreed to promote a selected number of sergeant-majors to the rank of company sergeant-major. In a press release published in May 1960, the General Staff of the Force Publique made public the guidelines for its Africanization policy.

> Depuis quelque temps, l'administration se préoccupe de la formation accélérée des Congolais. Certains militaires se demandent ce qu'on fait dans ce domaine à la Force Publique.
> Certains estiment que le commandement ne se préoccupe pas suffisamment de la promotion des Congolais. C'est une erreur. Cette question fait l'objet de toute l'attention du commandant en chef. Toutefois, à la Force Publique, les grades ne s'accordent qu'au mérite. Pour obtenir un grade, il faut montrer qu'on est capable d'en exercer les fonctions . . . Ensuite, ils oublient qu'ils se sont

> engagés volontairement à la Force Publique pour servir leur pays et non pour satisfaire une ambition démesurée. Actuellement, la Force Publique doit rester forte et unie et il ne faut pas que les Congolais s'y disputent pour savoir qui obtiendra tel ou tel avantage. Tous prétendent avoir droit à des priorités, même ceux qui ont quitté depuis longtemps la Force Publique voudraient maintenant prendre la place de ceux qui y sont restés.
> Cette situation n'est pas bonne. Dans une armée, il faut avant tout de la DISCIPLINE. C'est le commandement, et le commandement seul, qui fixera les conditions de promotion des Congolais et cela suivant les directives du gouvernement congolais (Nsango Ya Bisu, May 15, 1960).

Three avenues for advancement to the officer corps were offered to African recruits: (a) Through seniority. Any company sergeant-major with eight years experience, who successfully completed a qualification examination could become eligible for officer training. But since the first company sergeants-major were promoted only in 1960, they would not be eligible until 1968. (b) Through the N.C.O. School of Luluabourg. This was open to soldiers of less than 30 years of age, who successfully completed an examination in Greek and Latin. (c) By attending the Royal Military School of Brussels, where any soldier with a university degree could apply for admission.

Obviously the Force Publique, now the Armée Nationale Congolaise (A.N.C.) was not expecting a significant number of African officers to graduate for at least 15 to 20 years. However, the African soldiers in the A.N.C. did not accept these policies docilely. At the time of the formal transfer of power they made it clear to Prime Minister Lumumba that they expected a great deal from independence:

> Il nous est permis de rappeler qu'en cas où les leaders congolais ne veulent pas prendre les mesures indispensables pour l'organisation et l'africanisation des cadres à la Force Publique, nous vous rassurons que l'indépendance sera boiteuse, le 30 juin ou avant . . . Que M. Lumumba nous dise les conditions requises pour devenir officier ou général à l'armée. Si les militaires ne sont pas capables de prendre la responsabilité de la Force Publique, c'est bien compréhensible que tous les leaders qui réclament l'indépendance ne se sont pas préparés, car nous ne voyons pas parmi eux ceux qui ont fait de hautes études pour devenir ce qu'ils prétendent (Emancipation, March 19, 1960).

Their grievances were directed mostly at the continued presence of expatriate officers which prevented Africans from being promoted:

> Ne voulez-vous pas que les officiers et les sous-officiers européens soient remplacés par les Congolais? Pourquoi prolonger ainsi l'avancement de grade? Est-ce que tous les européens de la Force Publique sont-ils plus intelligents et plus actifs que les MILICO? (Notre Congo, March 30, 1960).

A few weeks later these grievances erupted in the mutinies which plunged the country into turmoil for the next four years.

On the whole the net result of these repeated attempts by the political authorities to accelerate the Africanization of officer corps was an increased permeability of the military organization's boundaries. Because African regiments had not participated in the independence struggle and had not prepared themselves for the changes which would inevitably accompany independence they could not successfully resist the intrusion of political leaders. The latter, because of their lack of interest in and knowledge of the military way of doing things, could not understand the equivocations of the military in bringing their

command structure into line with the new political conditions. This failure of the military to resist the politicians' intrusion only led to further resentment of the officers for the ability of the new political leaders.

However, differences of opinion over Africanization of the army were not the only areas of disagreement between the expatriate officers and the political authorities. In Ghana, President Nkrumah, against the advice of his officers, wanted to double the size of the army and to provide it with a more sophisticated arsenal of weapons. Similar suggestions to expand the armed forces and to create naval and air forces were often made by local politicians envious to see their districts benefit from the opening of a new military camp or a new military academy. In Ghana, the government had to reiterate the military's stand, insisting that the primary aim of the armed forces was not "to provide an avenue for absorbing unemployed manpower (Ghana, Legislative Assembly Debates, June 13, 1960)."

Defence treaties with former colonial powers and military assistance agreements provided a third area of disagreement between the politicians and officers. The national military establishments, often still staffed with expatriate officers, were anxious to stay closely allied to their former colonial masters to protect their own autonomy as well as the unity and continuity of their military tradition. The

new political leaders were motivated by different considerations. Defence treaties were seen as an unacceptable exchange for their newly acquired independence. A diversification of the sources of supply and training of officers became part of an external policy of active neutrality as well as a way to accelerate Africanization of the army. A defence agreement between Nigeria and the United Kingdom was cancelled in 1952, and Ghanaian cadets were sent to the Soviet Union for military training. In both cases the military point of view had had to give way to political considerations.[65]

In addition to infiltrating the military organization with political considerations, these attempts to arrive at instant Africanization led to serious strains and cleavages within the new national armies. In the Ivory Coast, Senegal and Kenya, where entire battalions were transferred to the jurisdiction of the new state, the suddenness of the transfer did not disrupt these units since their internal arrangements were left intact and they were provided with the same material and financial conditions.[66] But in countries like Dahomey and Togo, where new battalions were constructed from disparate elements from the same geographic origin who had served with different units of the French Army, a rapid transfer of jurisdiction created problems of discipline and adjustment at all levels of the organization. In the officer corps, tensions developed as a result of accelerated vertical, as well as

horizontal mobility. Since most officers were commissioned within a relatively short time after their induction, they tended to measure the progress of their respective careers against each other's. Such comparisons led to personal rivalries. Tensions also developed between officers commissioned from the ranks and those who received regular commissions after an officers' course. The latter tended to be younger and suspicious of the professional qualifications of their older colleagues. Tensions also arose between recently commissioned officers, either from the ranks or from the officers' schools, and those who had received their commissions during the colonial administration and who now occupied the highest echelons of the command structure. The older officers were often sceptical as to the motivation of the new officers whom they suspected were more attracted by material incentives than by the prospect of a military career. The younger officers, on the other hand, questioned the qualifications and ideological position of officers who had served in Algeria or Indo-China. According to Van Horn (1966), this lack of respect of young Ghanaian, Malian and Nigerian officers for their commanders (many of whom were doubly suspect as former N.C.Os and colonial servants) created discipline and command problems of such magnitude that they impaired the performance of these units during the United Nations operations in the Congo.

The new system of rapid promotion also meant that the middle and lower levels of the command structure were filled with officers from similar backgrounds and with similar command experience. As a

result, senior officers who often had only a few months' seniority found it difficult to command the respect of their junior colleagues who tended to see themselves doing a better job. Also, since they expected to be moved either vertically or horizontally, they were not totally committed to their present assignment (Afrifa, 1966).

At the bottom level of the command structure, there was a large discrepancy in age and experience between the most junior officers and the N.C.Os. The latter, as Luckham (1969) points out in the case of Nigeria, held an almost exclusive monopoly on the day-to-day operation of the units, a fact which was deeply resented by young officers with their eyes set on promotion.

Grusky (1964) suggests that a process of rapid succession and constant transfer usually increases the homogeneity and depth of officers' commitment to the military organization as a whole. In the case of the African armies, because of their recent transformation into the armed forces of independent states, this mobility accentuated internal cleavages rather than a solid commitment to the military organization. As Luckham points out in the case of the Nigerian army, this constant mobility of military personnel made it

> difficult for any commander to stabilize his lines of authority over his subordinates to develop enough leverage over them to keep their initiative sufficiently in check (Luckham, 1969, p. 412).

In this constant struggle for promotions, officers tended to rely on outside support to further their own careers. Thus informal alliances between officers and politicians often resulted. These were usually not based on any common political or social positions but mainly on similar ethnic or geographical origins.[67] Thus at least initially the new African armies did not experience the development of internal political factions reflecting social or ideological divisions existing in overall social systems as was the case in Latin America. Ethnic rather than ideological links developed between officers and politicians. But in time these links developed more political connotations as membership in different ethnic groups became associated with specific political stands.

Attempts by politicians to restore a measure of ethnic balance within the armed forces accelerated the transformation of these ethnic ties into political associations. At the time of Nigerian independence, the government instructed the military recruiting boards to give preference to Northerners with equivalent aptitudes for officer training. The policy aimed at alleviating the domination of the Eastern and Western elements. Since this recommendation did not bring any result, a quota system was formally introduced in 1961 in spite of the objections of the military planners. This procedure insured that 50 per cent of the cadets sent to training schools would be Northerners.

Luckham (1969) shows that this quota system increased the internal tensions within the Nigerian army and gave them a political significance. Sub-regional groups began to fear that they would eventually be eliminated. Southern officers were offended by what they saw as an insult to their professional abilities. As a result of this policy of ethnic balancing, the Nigerian military were ultimately reluctantly drawn into the political controversy surrounding the accuracy of the national census on which the ethnic quotas were based.

In the French colonies the events surrounding the 1958 return of General De Gaulle brought politics to the army in an even more direct way. Military officers in Africa were instrumental in the creation of a host of Comités de Salut Public (C.S.P.). Once established, these C.S.Ps made no secret of their use of military liaison facilities to communicate directly with Paris for instructions, for their only goal was to agitate in support of General De Gaulle. African political leaders on the other hand worried about the effects of a De Gaulle military dictatorship, and responded by establishing local Comités de Défense Républicaine, drawing on the entire political spectrum for members: the General Union of African Workers, youth organizations, political parties and Christian trade unions. As a result the hostility between the military and political leaders rose to such a point that the military authorities in Paris ordered the African garrisons to prevent open clashes at all costs.[68] In Tananarive, the military were preparing to take over the offices of the High Commissioner and were stopped in this enterprise by the news that the political leaders

of the Fourth Republic and De Gaulle had reached an agreement over the transfer of political power. Later, during the campaign for the 1958 referendum, local military garrisons exerted considerable pressure to vote "yes", particularly on veterans of the colonial army (Foltz, 1965).

The consequences of these years of French political instability were twofold. First, African nationalist leaders were directly confronted with the reality of the army and its potential for intervention in the political process. Second, African military officers got first-hand experience of the potential influence of the army, while learning to distrust politicians and their tactics.

At the same time, the politicians both in the former French and British colonies rapidly overcame their initial ignorance and distaste for the armed forces as they discovered the immense potential that control of such a force could provide. This discovery took many different forms, but all of them tended to increase the permeability of the military's organizational boundaries. For example, in Ghana the government succeeded in transferring control of the army from the legislative to the executive branch, in order to have easy access to its use. The government argued that since all other residual powers of the Governor had been transferred to the Cabinet, control over the military and defence matters should also be in their hands. In some cases (Mali, the Ivory Coast and Nigeria) the government forced a

reluctant military to undertake "civic action" projects which, in the eyes of the military, only distracted them from their primary duty of defending the country.[69]

This reluctance is understandable when the African regiments' self-image at the time of independence is considered (Bobrow, 1965). This image included an ambition to extend their own material welfare and to preserve a combat spirit. The manual labour involved in civic action projects offered little support to either aspect of this image. Such projects would not bring any more material advantages or increase their influence in national politics. In addition, their image of themselves as a powerful combat force made civic action projects seem either irrelevant or even detrimental to their main function. Eight months before the coup in Mali, Colonel Traore, the Chief of Staff, made it clear that the army's mission was to fight:

> nous estimons quant à nous que la raison d'être d'une armée est de se battre quand cela est nécessaire pour défendre l'integrité territoriale de son pays et les institutions légales de son gouvernement (Afrique Nouvelle, March 16, 1966).

Even when the military did not object to "civic action" duties it soon became apparent that there were actually very few such tasks to which the military could contribute effectively. In some cases civilians could do the task better; in others, the task was too demanding for either civilians or the military. In 1962, the Ivory

Coast instituted a Centre de Service Civique in Bouaké. Its purpose was to stop the shift in population from the country to the city by offering training programmes to turn young men into efficient soldiers and later into productive farmers. The programmes were terminated in 1964 after the first promotion of farmer-soldiers. It was transformed into a civilian training programme under the responsibility of the Department of Education. From the start the experiment had to face heavy opposition: the jealousy of French officials over the presence of Israeli advisors; the impatience of the military over the loss of its recruits to framing; the failure of the programme to produce either a successful farmer or an efficient soldier; and finally, the suspicion of President Boigny that the Minister of Defence was using his civilian responsibilities to plot against the government (Bell, 1968).

Political leaders in the former British territories were on the whole more reluctant to use the military for "civic action" duties. A Gold Coast government spokesman justified the government's decision not to give construction contracts to the engineering section of the army:

> The army is not an organization which could undertake commercial contracts . . . we all recognize the fact that the army as a whole is very useful to the public and since the engineering section is part of the army, we conclude that the nation benefits from it (Ghana, Legislative Assembly Debates, February 2, 1957).

Nkrumah's administration preferred to use civilian organizations to carry out civic action programmes. The rationale was that it would be unproductive to use the military when the same tasks could be carried out by young people and the unemployed.

Absent from civic action projects, African officers in British regiments, because of the absence of well-defined Africanization policies, were also constantly moved from one command to another and from one training school to another. They thus had little chance of developing any close contacts with the community where they were stationed. The practice of constantly moving, for security reasons, the units around the country, inherited from colonial days, further prevented the military from any real involvement in the communities where they were stationed.

Political leaders both in former French and British colonies were quick to realize that the army was a useful instrument in the difficult game of political survival. In six countries, internal rebellions were extensive enough to necessitate the intervention of the army.[70] The consequences of these interventions were often paradoxical. In Mali, the army's success in halting a Touareg "rebellion" increased its self-confidence. The success on the battlefield convinced the army that the population now had a more positive vision of its role, and was ready, if not eager, to accept military rule. In addition to increasing the army's self-confidence,

the action also led them to the suspicion that the political authorities were preparing to disband the army as a fighting force since the military was then asked to build bridges, schools and a stadium.

In the Congo-Kinshasa and the Sudan, where the army was less successful in dealing with internal rebellions, its members became the object of increasing attacks for failure to fulfill their military responsibilities. Confronted with such criticisms, the military responded by throwing the blame for the failure back on the politicians. Rumours to the effect that the Kasavubu government intended to open negotiations with the rebels were received by Colonel Mobutu as a direct attack on the effectiveness of the army.

Service with the United Nations Forces in the Congo also had an important effect on the African officer corps' vision of politics and political leaders.[71] If the testimony of Colonel Afrifa is taken as valid, the Congo operation increased the Ghanaian officers' distrust of their own political leaders and of politicians in general. They blamed their operational difficulties on the "politicians at home who had placed us under the command of the United Nations, and at the same time taken active and sinister sides in the whole Congo affair (Afrifa, 1967, p.66)." The continuous criticism in the press of Nigerian and Ghanaian support for the neo-colonialist operation convinced the military that they were being used as political pawns.

In addition, the state of open war between Congolese politicians and the A.N.C. (notably the Mobutu coup of 1960), further convinced the African officers of the danger of political interference in army matters. The performance of the African contingents during these operations also revealed the lack of military expertise on the part of their African officers. Although the African participation, both in terms of number of soldiers and man-months spent in the Congo was impressive, their battlefield record was less positive. The Malian contingent had to be sent back because of internal dissension. The Guinean battalion equipped with anti-tank and anti-aircraft guns was sent to the interior so as not to harm anyone.[72] The Ghanaian contingent was involved in the only serious defeat of the ONUC forces when in April 1961, 40 Ghanaian soldiers were captured by rebellious elements of the A.N.C. and immediately executed.[73]

This increased recognition by political leaders of the political significance of the use of force and their distrust of the nationalist fervour of their armies led them to create para-military units which could effectively replace the army on certain delicate missions. For example, the army can be used for crowd control but is of little use in infiltrating civic and tribal organizations or in spying upon its own members.[74] In Ghana, the para-military units of the party (C.C.P.) provided alternate employment for those individuals who could not gain admission to the regular army. Para-military units in the Congo-Kinshasa were established as a concession of President

Débat to the radical members of his party who wanted a force of their own to officer the party rank-and-file and even to protect its leaders from any intervention by the regular army. As we shall see, this loss of control over the instruments of violence caused widespread uneasiness among the African armed forces and can be considered an immediate reason for their decision to stage coups in many cases.

This brief examination of the African armies during the immediate post-independence period forces us to further revise the popular picture of African military organizations summarized in Chapter I. At first, political leaders showed no concern for their newly acquired military organizations. Gradually, for reasons of prestige and national pride they became interested in one aspect of military policy: the Africanization of the officer corps. Soon, their views as to the best way of achieving Africanization came to conflict with those of the military. In the end, the views of the politicians prevailed. Gradually, African military organizations lost their monopoly of control over admission in the organization. In Tanzania, immediately after the 1960's mutinies, President Nyerere made membership in the government party one of the pre-conditions for joining the army (Bienen, 1965). Similarly, pressure from Northern politicians in Nigeria forced the central government to impose an ethnic quota system for the recruitment of officers.

There were other areas such as promotion, training and equipment where government interference curtailed the autonomous control previously enjoyed by the military. President Nkrumah was accused of "running the army on family sentiments unbefitting any decent army (Afrifa, 1967, p. 43)" and interfering with the promotion policy, by attempting to infiltrate it with politics:

> For a long time, the Convention People's Party had made a steady assault on the army with a determined programme to indoctrinate it with the ideology of Nkrumahism. I remember that a branch of the Convention People's Party was even opened at the Teshie Military Academy for this purpose. There was an occasion when officers were made to join the Convention People's Party by force . . . (Afrifa, 1967, p. 99).

President Keita of Mali decided unilaterally to limit promotions to the ranks of Colonel. The governments of Nigeria, Ghana and Tanzania decided, over the military's objections, to extend its sources of supplies and training.

The actual function of the military was also modified by decisions of political leaders. Civic action projects, at first despised by the military, came to be accepted for reasons of corporate survival in the face of growing pressure to decrease financial support. An immediate consequence of this involvement in civic action projects was to increase the military's confidence in its own administrative capabilities.

As mentioned in Chapter II, one of the major characteristics of the military as an organization is its control over the instruments of violence. In the case of African military organizations, there has been since 1958 a constant erosion of this control, in the face of the growing influence of party militia and civil defence groups.

In summary, the borders of the African military organization became increasingly permeated in the post-independence period. The military only retained an image of being strong, neutral and apolitical. The fact that the military had not participated in the independence struggle contributed to its isolation. It had little influence in the decision-making process of the country, even when the decisions directly affected the internal arrangements and the definition of the military's role. Attempts by the political leaders to adapt their armies to the new conditions created by independence only hastened the political infiltration of the military. Far from being all-powerful organizations, by 1965 African armies had become vulnerable and weak, open to many new influences and with very little autonomy. Military coups were largely a result of this increased vulnerability. This last section will examine in detail how this increased vulnerability led to decisions to intervene.

Political Interventions by African Military Organizations, 1963-70

The military has rarely justified its decision to intervene in the political process in terms of its own vulnerability. There are only occasional allusions to the fact that the army was not

receiving the treatment to which it was entitled, and politically this discretion is easy to understand. However, a close scrutiny of the immediate reasons behind all the 26 successful and 18 attempted coups which have erupted since 1960 suggests that the true cause was often the military's increased vulnerability which, as has been shown, was the result of a number of factors.

In some cases the rise of para-military units was the determining force behind the military's decision to intervene. Not only did these units constitute a direct challenge to the military's monopoly over the instruments of violence, but it also raised the possibility in the minds of the officer corps that the regular army could easily be abolished and its responsibilities transferred to these units. These para-military units were often accused of monopolizing equipment and financial support which should rightly have gone to the regular army. This was a major reason behind the 1966 military coup in Ghana. Colonel Afrifa, one of the leaders of the coup, stated:

> We were also aware that members of the President's own Guard Regiment were receiving kingly treatment. The pay was higher and it was an open fact that they possessed better equipment. The men who had been transferred from the regular army no longer owed any allegiance and loyalty to the Chief of Defence (Afrifa, 1967, p. 100).

The military also often felt that their responsibility for maintaining internal law and order was complicated by the existence

of these new units which could rarely exert any control over the distribution of their weapons. There were also obvious operational difficulties resulting from the co-existence of two distinct armed forces which did not share a similar view of what law-and-order-operations entailed and yet were supposed to be jointly responsible for defence and law-and-order missions. Finally, the regular army saw the para-military units as a threat to the internal stability of the country since many of them were open to the influence of foreign ideologies, unacceptable to the regular army. The army felt this ideological factor was threatening the high esteem in which it had always been held by the population.

In the Central African Republic, the military establishment particularly resented the fact that its budget was cut while the police and Bureau of Internal Security were receiving more and better equipment. The army felt this situation prevented it from performing its traditional mission of protecting the nation's boundaries from the rising threat of infiltration and disorder. The regular forces in Mali, after numerous attempts to convince President Keita to curb the party militia, finally took power themselves. They particularly resented the fact that the party militia had designated itself as keeper of the revolutionary morality and asked to be given responsibility for some of the regular army's military camps.

The Congolese (B) coup of 1968 is a classic example of how the military can be prompted to intervene as a result of the rise of para-military units which pose a threat to its corporate survival. On May 19, 1965, the Congolese government announced a general mobilization of all the "forces vives de la nation" under the aegis of the army. In each local and regional territorial unit an armed group was to be established under the control of the army. When the army failed to carry out the mobilization rapidly enough, a National Civil Defence Force (N.C.D.F.) was established in June 1965 and placed under the direction of the political bureau of the party, but administered by the Minister of National Defence. The N.C.D.F. grouped together first-aid associations, the militia composed of workers and farmers, and the existing brigades de vigilance. Its responsibilities included the political and civic education of citizens, internal security, civil defence and "encadrement" of the party rank and file. The army evidently resented civilians being given arms in this manner. After an unsuccessful coup in July 1965, in which the military was suspected of having participated, administrative control over the armed forces was taken over by President Débat. Political control of the purged army was given to the youth division of the dominant party, the Mouvement National de la Révolution (M.N.R.).

On June 22, 1966 the regular army was transformed into a National People's Army under collective military rule, a fact which was resented by most officers. Political commissars were given responsibility for the organization and political education of the armed forces, following guidelines established by the party. The role of the army was redefined to include protection of the revolution; participation in economic development; and education and mobilization of the population. Five days after this policy was announced, units of the N.C.D.F. went on a rampage and destroyed the secretariat of the M.N.R. Only the presence of Cuban instructors stationed with the National Civil Defence Force prevented the mutinous soldiers from overthrowing the government.

After this incident government authorities began to complain publicly about the high cost of the army and to urge its participation in civic action projects:

> Les forces régulières doivent être reconverties dans le sens de la qualité. Il faut que l'armée participe à la production et qu'elle aide le peuple à élever son niveau de vie (Chronologie Politique Africaine, June 30, 1966).

Meanwhile the army was increasingly forced to arbitrate clashes between the police and the youth division of the M.N.R.; between the police and the N.C.D.F. or between the youth division

and the general public. On August 30, 1968, fighting broke out between an army patrol and a para-military unit. The party blamed President Débat for the incident.

> Les fils d'un même pays se sont tirés dessus parce qu'on n'a pas voulu prendre à temps ses responsabilités pour rappeler à leur devoir les égarés et les inviter à déposer les armes . . . les incidents qui se sont produits ont opposé l'armée régulière à des éléments incontrôlés (Chronologie Politique Africaine, Aug. 31, 1968).

Up to this moment Débat had always managed to maintain an equilibrium between the regular and para-military forces, and to play off one against the other. This incident marked the end of his rule. On September 5, the army seized political power and decreed the integration of the para-military units within the regular army:

> Il s'agit d'un corps politique et il n'est pas possible à l'armée de le dissoudre. Nous avons décidé de l'intégration des unités tactiques, i.e. celles qui ont reçu une formation militaire, mais non l'intégration des milices dont les membres ont un emploi dans le civil et aucune vocation pour l'armée (Chronologie Politique Africaine, Aug. 31, 1968).

The army's resentment of para-military units in Mali and Burundi was also aggravated by the government's decision to increase the involvement of the regular forces in civic works projects. This decision was seen by the army as a further indication that the government was preparing to transform the army into a public works corps while turning the responsibility for security and defence over to the para-military units.

Although not immediately threatened by the presence of para-military units the armed forces in Somalia, Sudan and Dahomey were still concerned about the defence and military policy that the newly installed regimes might follow. They decided to act to avoid any further invasion of their area of control.

Taken by surprise by the murder of the President, the Somalian army feared that the new government of Premier Egal (in whose selection it had not participated) would not be well pre-disposed towards the military. In the Sudan, following the 1967 defeat at the hands of Israel, the armed forces complained at the restraints imposed by the civilian regime on military promotions and the slow deterioration of the army's equipment and morale. This growing concern is obvious in the pledge of the new military leaders to re-open promotions and to "rebuild the armed force, consolidate its potential, equip it with the most up-to-date weapons, raise its efficiency through training and raise the social standard of military men (New York Times, May 26, 1969)."

The fourth Dahomean coup was sparked by a similar anti-military attitude on the part of the government of President Zinzou whom the army had itself installed a few months earlier. However, President Zinzou immediately stated: "Now I alone command and the army does not question my authority". The army particularly resented his attitude concerning its development. In an interview given to the weekly Jeune Afrique, Zinzou stated:

> J'ai dit aux militaires: "Messieurs vous venez d'éprouver les difficultés du pouvoir. Je ne sais si vous partagez mon sentiment, mais mon sentiment je tiens à vous le faire connaître. Ce qui manque au Dahomey c'est une autorité, un chef. Si vous avez voulu choisir un soliveau, une marionnette qui serait un jouet entre vos mains, vous vous êtes trompés d'adresse! . . . J'ai déjà eu à leur dire que la réforme de l'état n'épargnerait pas l'armée, elle ira jusqu'en son sein. Je l'entreprendrai dans l'intérêt de la nation et sans hésitation. Je ne céderai à aucune pression, surtout pas à la leur (Jeune Afrique, 396, Apr. 1968, p. 30).

In several situations the military acted to prevent the political rise of other groups, particularly the trade unions, whose policies were seen by the army as a direct threat to its corporate survival, and to the interests of some of its members who were closely allied with other groups.

General Lansana's military coup of 1967 in Sierra Leone was not intended to clear up the political situation or to prevent political chaos. His immediate objective was to prevent newly elected President Stevens from taking over and eventually endangering Lansana's control of the army.

The military could have easily seized power in Togo in November 1966 when the country was apparently on the verge of civil war. But military intervention at that moment would indirectly have favoured Kutuklui, who was considered a strong opponent of the army. His return to power could have meant public trials for those officers

responsible for President Olympio's death three years earlier. Thus the military had no alternative but to support President Grunitzky. Two months later this situation was drastically altered by Grunitzky's attempts to eliminate Vice President Meatchi. If such an attempt was allowed to succeed, it could easily have sparked a popular revolt by members of Meatchi's Union Togolaise. Civil war would then have seemed inevitable and the military would have been caught in the middle. If this occured, Kutuklui and his Unité Togolaise might possibly have emerged the victor. Both prospects were so clearly unacceptable to the military that it preferred to take power itself.

In November 1966, the trade unions in Upper Volta called for a general strike following the decision of President Yamego to initiate an austerity programme which included a 10 per cent cut in civil servants' salaries; a halt to all promotions in the civil service; and the standardization of family allowances and indemnities for senior civil servants. Following the discovery of a plot led by Ouedraogo, the former President of the National Assembly, a state of national emergency was declared and the army was asked to fulfil their responsibilities, when faced with the possibility of subversion by the labour movement. The possibility that the trade unions would seize power for themselves was apparently very real in the eyes of the army. Since the unions had often criticized the size of the military

budget, it was reared that such a change of leadership would be catastrophic for the army. Faced with this possibility, the army seized power for itself on January 3, 1966, justifying its action by a declaration of national loyalty:

> Considérant la gravité de la situation, considérant que les intérêts supérieurs de la nation sont compromis, considérant que la paix sociale est gravement menacée, pour sauvegarder les institutions démocratiques et républicaines et éviter toute effusion de sang (Chronologie Politique Africaine, Jan. 3, 1966).

The Dahomean coup of 1963 followed an identical sequence. On October 10, 1963, the Dahomean trade unions publicly denounced the financial policies of President Maga. He retaliated by arresting the trade union leaders and by announcing his intention to ignore their attacks. On October 25, Maga put all his Cabinet members under arrest for insurbordination. Following these events the Union Générale des Travailleurs du Dahomey asked for Maga's impeachment and set up a Revolutionary Committee to supervise this action. Three days later General Soglo announced that the army had taken control of the government to prevent bloodshed. In his first public declaration, Soglo made it clear that the army had not acted out of a concern for the political future of the country but in a state of self-defence after two of its members had been mysteriously shot.

In the eyes of the Dahomean and many other African officers, trade unions not only constituted a potential danger to their corporate survival, but they were also seen as a major cause of the country's problems. First, trade unions were accused of raising the material

expectations of their members while diminishing their sense of responsibility. Second, like the para-military groups, they were seen as points of entry for dangerous foreign ideologies. Third, through their use of strikes, they were believed to contribute to the deterioration of political authority. Fourth, through their demands for higher wages, they prevented the implementation of the austerity measures needed to bring the country out of its economic decline. Finally, the unions were seen as the forerunners of a coming social revolution threatening all the advantages gained by independence, including the position of the military. In view of this irresponsible behaviour, the army believed it to be its "national" duty to intervene and restore order to the country.

In some cases the military intervened in the political process to prevent its use on missions which, considering the deterioration of their military capabilities, could have been catastrophic for their survival. The Ghanaian officers were seriously worried at the possibility that President Nkrumah would send them to Rhodesia and South Africa to liberate the African populations from colonialism and oppression. After the nightmare of the O.N.U.C. expedition, such a possibility threatened the entire annihilation of the Ghanaian army. In Afrifa's words:

> It was shameful to see a Ghanaian soldier in tattered and ragged uniform and sometimes without boots during his training period. And this was the army Kwame Nkrumah had alerted for the offensive operations in Rhodesia . . . I do not know why we would have been fighting . . . From concern for my troops, I felt it would be criminal and purposeless to lead such an army of excellent soldiers, ill-equipped, to fight in an unnecessary war (Afrifa, 1967, p. 104).

For an army which was under strength, under equipped, torn with internal cleavages, the possibility of a civil war constituted a serious threat which had to be prevented even at the price of an open intervention.

In Upper Volta, the alternative was clear according to General Lamizana.

> La grève avait pris une telle ampleur que je me trouvais devant l'alternative soit de faire tirer sur la foule au risque de tuer plusieurs milliers de Voltaiques ou accepter de prendre le pouvoir pour éviter toute effusion de sang (Chronologie Politique Africaine, Jan. 3, 1966).

Internal dissension within the military organization itself also constituted cause of military interventions, especially against military or military-civilian regimes. The 1967 coup by a group of young officers in Dahomey was the result of the standing feud between General Soglo, a Southerner and the self-appointed head of the new coalition government, and Lieutenant-Colonel Alley, a Northerner and

the army Chief-of-Staff. The conflict between these two men was increased by Soglo's decision to remove responsibility for the police from the Chief-of-Staff. Social unrest was increased by the arrest, in December 1967, of the trade union leaders who had publicly opposed a series of austerity measures. In retaliation, the postal and telecommunications workers, university students and teachers went on strike on December 12. The government then outlawed all trade union activities, including strikes. At the same time a political crisis was set in motion with the resignation of all the civilian ministers in the Soglo government because of the failure of the regime to maintain internal peace. On December 13, on his own initiative, Lieutenant-Colonel Alley undertook a series of consultative meetings with trade union delegates to whom he made a number of conciliatory promises: the release of the jailed union leaders; a study group to re-examine the 25 per cent surtax; and the reconsideration of the decision to abolish the right to strike and to limit family allowances. On December 17 a group of young officers, concerned about the declining social and political climate and by the consequences of the Soglo-Alley feud, took over political power after having unsuccessfully requested Soglo's resignation:

> Le général Soglo s'obstine à ne pas donner spontanément sa démission comme ont eu à le faire dans ce même Dahomey, dans des circonstances analogues et dans l'intérêt supérieur de la nation des chefs d'état pourtant démocratiquement élus par le peuple (Chronologie Politique Africaine, Jan. 3, 1966).

They accused Soglo of having become a politician:

> Le général Soglo a vite pris goût au pouvoir. Au fil des jours, il est devenu non plus le militaire à qui une mission déterminée est confiée - redresser une situation - mais il est devenu un militaire, un général politicien (Afrique Nouvelle, Feb. 14, 1968).

The more serious consequence of the feud and the resulting explosive social climate was that it re-activated a number of latent cleavages within the armed forces: the traditional North-South rivalry; the opposition between senior and junior officers; between officers and soldiers; and between those officers supporting the Ahomadegbe or the Apithy political factions. In their first public declaration after the coup, the young officers admitted their major concern was the army's integrity, and only secondly the political situation of the country:

> Conscients des responsabilités qui sont les leurs devant la Nation et devant l'Histoire, les jeunes cadres n'ont été guidés que par le seul et unique souci de l'unité de notre jeune armée en premier lieu et ensuite celui d'assurer le plus rapidement le retour à la légalité par le jeu démocratique, condition sine qua non pour sauver le pays des déchirements qui le manaçaient (Afrique Nouvelle, Dec. 27, 1967).

The last two military coups in Sierra Leone were also staged for essentially intra-military reasons. A few hours after his own intervention to prevent President Stevens from taking office, General Lansana was himself arrested by a group of young officers who objected to his method of handling promotions and therefore decided to support the popular outcry for a return to the democratically elected government of Stevens and the All People's Congress. In 1968,

these young officers were supplanted by yet another group of officers who were concerned by the escalating failure of the current military administration.

In the case of Mali, a group of young officers were not only upset by recurring rumours of their coming disappearance, but also resented the political domination of their senior officers by the Keita regime, which they felt was dividing the army at a time when its very existence was threatened.

In only two cases, the Nigerian coup of January 1966 and the Congo (K) coup of 1965, did corporate motivations play a secondary role in the military's decision to intervene. Even then the decision was not entirely free from concern over the army's strength and survival. In the Congo the major reason for General Mobutu's coup of 1965 was apparently his personal ambition to become President. After an initial period of chaos (1960-64), the civilian government was slowly succeeding in bringing back order and stability. In fact in a 40-page pamphlet published in 1966, General Mobutu found the Kasavubu government generally acceptable. However, there were consistent rumours that the Kasavubu government was preparing to come to terms with the rebels which the A.N.C. had been unsuccessfully fighting for the last two years. Thus there may well have been purely military reasons for Mobutu's intervention. In Nigeria, the unsuccessful

coup by Major Nzeogwu and a group of Northern officers was apparently motivated mainly by ideological reasons. It would seem that they wished to replace a government which they believed was so thoroughly corrupt, despotic and conservative that only violence could succeed in bringing about political change. But as pointed out by Miners: "It also seems likely that the perception of this need for action may have been sharpened, for at least some of the rebel officers, by fears for their own military careers (1971, p. 179)."

By examining the circumstances surrounding the successful military coups which have occurred in Tropical Africa since 1960, it appears that in most cases the decision to intervene was based on purely professional concern to insure the survival and prosperity of the military organization. After looking at the recent history of these forces it is clear that the military had more than sufficient grounds to be concerned.

Originally created and associated with the colonial domination, African military organizations underwent a continuous reassessment of their utility, starting in the inter-war era. As it became clear to the colonial authorities that African regiments could play only a secondary strategic role in an age of mechanized warfare, there was little incentive to continue to support them at the same level as in the pre-1918 period. Local territorial governments for their part refused to commit large sums of money for the support of African

regiments, which were not expected to be needed during the transition to independence.

Without these financial resources, African military organizations could not, during the 1945-58 period, undertake any major programmes of expansion or Africanization likely to attract large numbers of African recruits. The latter preferred to join the civil service where the pay was better and the possibilities of advancement less uncertain. The task of African regiments was further undermined by their colonial image and by the presence of large numbers of expatriate officers who had little interest in training African officers who would eventually replace them. Ignored by the colonial and military authorities, regarded as a symbol of the colonial presence, and with little to do except to stand guard duty around the Governor's palace, African armies became increasingly isolated from the political environment.

Living in isolation, the militaries were ill-prepared to meet the challenge of the more turbulent and complex environment created by national independence. In the short run, this isolation allowed African military organizations to concentrate on duplicating, at least in its most superficial aspects, its European models. This isolation also provided the military with the conviction and the popular image of being above political rivalries.

After independence the African military organizations found themselves questioned by many of the new political leaders and with little support from other organizations. Under pressure from these politicians, their traditional defence role was modified in favour of civic action and police activities. Their control over the instruments of violence was eroded in favour of new para-military units and political considerations began to influence the governments' policy towards admission, training, supplies and promotion. With their boundaries increasingly permeated by external considerations, military organizations began to fear for their corporate survival.

However, African military organizations, like all organizations are also institutions and as such participate in the shaping of their environment. Military organizations are favoured in the sense that, although dependent on the state for their resources and legitimacy, they are the ultimate guarantee of the state's own survival. When threatened by the rise of para-military units (Ghana, Central African Republic, Congo-Brazzaville), by their participation in civic action projects (Mali, Burundi) or by the potential rise of an unfavourable political leadership (Somalia, Sudan, Dahomey, Togo, Sierra Leone, Upper Volta), the African military organizations have made use of their favoured position as social institutions to remodel their political and socio-economic environment in a way more favourable to their growth.

In Part II of this study an attempt has been made to reconstruct the reality of African military coups, what Kaplan (1964) calls the "logic-in-use" which led to the decision to intervene. In this attempt, internal features of the African armies have been stressed. The armies have been seen as open-systems interacting with their environment. The next step is to concentrate on the environment itself and on those characteristics which taken individually or together favour the occurrence of a high degree of military intervention in politics. Having focussed on the military organization, its changing characteristics under environmental changes and the reasons associated with its decision to intervene, Part III will switch to a more global and abstract level, and look at the environment itself.

NOTES AND REFERENCES TO CHAPTER III

1. The concept of "state" is being used in its most extensive sense. On African political systems and their military organization, see Argyle (1966), Diagné (1967), Diop (1960), Trimberger (1964) and Vanisina (1966).

2. As Read explains "to the Ngoni war was like work and his heart rejoiced of it (1956, p. 29)." In Ruanda a military code of 185 articles specified such details as the role of the king's mother during the war ceremony and the number and quality of the royal milk cans for which each regiment was responsible (Kagame, 1952; Maquet, 1954;61). On military organizations in tribal Africa, see Fried (1961), Little (1967) and Paulne (1960).

3. This was generally true except in Ethiopia where a long military tradition played a determining role in the abortive coup of 1960, when the regular army, loyal to the Emperor, refused to join the imperial bodyguard in its attempt to overthrow the Selassié regime (Greenfield, 1965; Levine, 1965,68; Panshurst, 1967).

4. See also Brackenbury (1968), Colson (1969), Hunter (1961) and Hargreaves (1969).

5. In 1806, 1811, 1814-15, 1823-26, 1863, 1873-74, 1895 and 1900.

6. For example, the Moorosi in Lesotho, the Ngoni and the Ndebele in East Africa and the Swahili-speaking peoples of East Africa, see Atmore (1970), Wills (1967), Jackson (1970) and Rubenson (1970). On Ture's resistance, see Legassick (1966) and Person (1970).

7. The European conquerors were aware of the uncertainty of their military position. In a letter to his government, Johnston, the British envoy, suggested that the rights of the Ganda aristocracy should be preserved and that no effort should be spared to turn them into allies since they were in control of "something like a million fairly intelligent, slightly civilized negroes of war-like tendencies and possession of about 10,000 to 12,000 guns (Low and Pratt, 1960, p. 94)."

8. For example, Mumia, ruler of the Wanga in the North Karirondo District, succeeded in enlisting British support to consolidate his rule over his rivals (SaNegree, 1966). Also the Lozi thought British intervention would insure them control over the Balovale and the Mankoya (Ranger, 1969). The Samburu of North Kenya were also saved from extermination at the hands of the Turkana through the British conquest (Spencer, 1965).

9. In the nineteenth century African recruits were used in both European and colonial theatres of war: in the Crimea (1854-55); Italy (1859); France (1870-71); Syria (1860-61); China (1860-64); Mexico (1862-66); Indochina (1861-69); Formosa (1884-85); Siam (1893-97); Tunisia (1881); and the Tonkin (1883-91). The Tirailleurs saw action in Senegal (1843-86), in Nigeria with the 1879 expedition of Captain Gallieni, in the Sudan against Samory (1892-94), in Dahomey (1892-95) and in the Congo (1893-94). See Suvet-Canale (1964), Spillmann (1948) and Thompson (1960) for more detailed descriptions.

10. On the origins of the Force Publique, see Force Publique (1952) and Janssens (1961).

11. Local African forces were also recruited in the Portuguese territories of Angola and Mozambique.

12. According to Niven this policy helped to make "the subsequent relations between the British and the people of Nigeria much easier and happier than was the case in other territories (1967, p. 221)."

13. On the origins of the colonial forces in the British territories see Kirk-Greene (1964) and Mercadier (1913). In Somalia, it was the immediate survival of the colony, threatened by Mullah's raiders, which impelled the Colonial Office to authorize the establishment of the Somali Camel Constabulary with 150 members (Battersby, 1914).

14. On the role of the African colonial troops in the colonial rivalry see Thomson and Middleton (1959). In 1907 a French-Liberian treaty forced the Liberian government to raise a permanent frontier force of native soldiers to patrol its borders. The Liberian army was born as a result. Its initial strength was set at 600 men with mulatto officers from the American army (Buell, 1928).

15. Busia (1961) notes that it is not until 1917 that the Ashanti were allowed to serve in the force. Furthermore the existence of this regiment served as a permanent reminder to the Ashanti of their humiliation and the loss of their military sovereignty.

16. The text of these decrees can be found in the Journal Officiel, July 7, 1900; November 14, 1904; July 7, 1905.

17. Mangin's ideas were first presented in the Revue de Paris, July 1 and 15, 1909. A summary of the debate can be found in Ly (1957).

18. A negative German reaction to the idea of a Force Noire only aided its prompters. A German commentator expressed his disgust in the following terms: "En tout cas le projet de M. Langin aurait

un bon côté: l'odeur des cadavres et la pestilence disparaîtraient du théâtre de la guerre, car il est bien certain que les cannibales du Congo feraient table nette après le combat (Neuste Nachristen, Nov. 7, 1909; (translated from the German version and quoted in Ly, 1959, p. 47)."

19. Between 1911 and 1914, an average of 9,000 Africans were inducted into the French army each year. This number was in line with the ceiling of two recruits per 1,000 inhabitants established by the National Assembly. In the Belgian Congo natives were also recruited through a mixed system of conscription and voluntaring but for a period of five years, later extended to seven years.

20. This policy was not always successfully applied, particularly in view of the enthusiasm shown by British officers. In East Africa alone there were six major areas where military expeditions were carried out between 1901 and 1914: Somaliland (1901-04), the Highlands (1902-14), Jubaland (1902-14), the Central Province (1902-05), the defence of the railways (1902-06) and the Turkana mission (1910-11). One observer, A.C.W. Jerner, suggested "That each officer at landing at Mombasa should have been presented with two medals, one to be withdrawn after his first punitive expedition, and the other after the second (Bartlett, 1956, p. 196)." These officers often did not serve with their own home regiment but were individually assigned to African units, in which case they benefited from a better pay and indemnities. Natives were recruited for a period of five years and could live in the camp compounds with their families, under certain rules. A Sergeant-major was allowed to keep three wives; sergeants, corporals and privates with three years experience, two wives and all other troops one wife. Compared to the Force Publique in the Belgian Congo, there were few rebellions among British colonial troops. The Uganda Rifles mutiny of 1897 is the most notable exception (Bartlett, 1956).

21. This colonial force was in direct violation of articles I and VII of the Berlin Treaty of 1890 which forbade the importing of firearms into all African territories (Hebga, 1969).

22. See Boussenot (1916), Dane (1919), Moberly (1931) and Muller (1937) on the use of African troops in World War I. Of the 181,000 soldiers recruited from Tropical Africa, 134,000 were used in Europe. The following Table gives the geographic origin of the African soldiers who served in the French army during the 1914-18 period.

Geographic Origin	Soldiers	Support Personnel
North Africa	269,500	143,000
Tropical Africa	181,500	100,000[a]
IndoChina	48,900	51,000
Madagascar	41,400	6,000
Somalia	2,400	1,000[a]
Others	31,000	40,000[a]
TOTAL	573,700	340,000

Sources: Beer (1968); Sik (1968); Troupes (1931); Valluy, 1968.

a = estimated.

23. On the British colonial war effort see Lucas (1925) and Meill (1919). The following Table gives the geographic origins of the African soldiers who served in the British Imperial Army during the 1914-18 period.

Geographic Origin	European Soldiers	Native Soldiers	Support Personnel
Nigeria	1,587	13,980	100,000[a]
Gold Coast	397	9,890	25,000[a]
Sierra Leone	48	646	5,000[a]
Gambia	20	351	b

Source: Lucas (1925)

a = estimated

b = unavailable

Geographic Origin	European Soldiers	Native Soldiers	Support Personnel
East and Central Africa			
Nyasaland	b	19,000	195,652
Kenya	1,987	9,643	201,431
Uganda	b	7,750	178,819
Northern Rhodesia	b	1,598	41,000
Sudan	b	19,000	20,000[a]
Southern Rhodesia	5,577	2,752	30,000[a]
Zanzibar	b	900	4,295
Basutoland, Swaziland, Bechuanaland	342	2,019	b
TOTAL	9,958	87,529	792,197

Source: Lucas (1925)

Note: a = estimated; b = unavailable

24. See Sarrault (1923) for an expression of these fears.

25. Problems of physical adaptation also reduced the effectiveness of African recruits. As noted by Buell (1928) and Azan (1925) the rate of tuberculosis was nine times higher for African soldiers and the rate of nervous diseases three times higher than for European soldiers.

26. In 1929 LaSalle expressed this new colonial attitude by stating that a colony should be considered as a "gestion d'affaire fondée sur le principe qu'un projet ne doit pas être réalisé au détriment de celui qui a exercé son activité en faveur d'autrui (LaSalle, 1929, p. 23)."

    Consequently France is entitled to "autre chose des indigènes en reconnaissance des sacrifices qui les ont enrichis; autre chose qui soit une charge acceptée volontairement et dont la métropole soit seule ou presque seule, à recueillir le bénéfice. Cette charge, c'est l'aide apportée par mes colonies à la défense nationale, c'est le service militaire obligatoire (LaSalle, 1929, p. 37)."

27. "en récompense de brillants services de guerre ou pour services remarquables rendus à la cause française" (Journal Officiel, 1926; p. 12, 766). See also the decrees of Nov. 29, 1926; Jan. 1, 1928; April 26, 1940. According to Nyo (1927) the African recruit was particularly hampered by "his lack of intelligence, culture and initiative (1927, p. 484)."

28. Military budgets confirm this deterioration. In 1932, Great Britain was spending less than 5 per cent of its African colonial budget on defence matters (League of Nations (1922-39).

29. On the use of African troops during World War II see Crowder (1968), Haywood (1964), Kirkwood (1965) and Chailley (1968).

30. See Sik (1968) and Crowder (1968). Officially, this resistance to conscription was interpreted as the combined result of "agents provocateurs", peasants who refused to recognize the Christian dimension of the conflict, unsatisfied chiefs, local grievances and anxious parents (Chailley, 1968).

31. A different view was held by Carde, a Governor General of French West Africa. For him the African veterans "return developed, morally and intellectually . . . they have become conscious of the necessity for labor and discipline . . . permeated with these ideas they return to the villages where they become the best auxiliaries of the Administration. The prestige which has come of their residence in France, their travels, their new acquaintances, and their former warlike character leads them to work in the general interest. They not only give advice, they preach by example (quoted in Buell, 1928, p. 19)."

32. On British defence policy and strategy in the post-1945 era see Brown (1967), Goldstein (1966), Rosecrance (1968) and Snyder (1964). The problems of demobilizing 374,000 African war veterans soon revealed the disinterest of the British government in its African regiments. After an extensive survey the Directorate of Civil Demobilization determined that 90 per cent of the veterans were asking for civilian training in commercial and technical skills. But the British authorities were reluctant to undertake any programme which might give the African veterans, or for that matter the European population, the impression that the veterans constituted a privileged class because of their military activities. Instead the political and military authorities prefered "to see them absorbed back into tribal life with the least fuss and inconvenience (The Times, Aug. 21, 1945)." The opening of a few trading centres and veterans' villages constituted the bulk of the demobilization policy. In 1950 a government report could conclude that "it was surprising how the majority of veterans went back to their homes almost as if they had never left them (Great Britain, 1950)." On the problems of demobilization see Kirkwood (1965), Middleton (1965), Crowder (1965) and Meyer-Fortes (1965).

33. On the British process of decolonization see Carrington (1961), Grimal (1965), Kirkman (1966), McIntyre (1966) and Creek (1959).

34. See Strauz (1958) for a political analysis of this document and its significance in terms of colonial policy. At the Brazzaville Conference it was made clear that "toute autonomie, toute possibilité d'évolution en dehors du Bloc français serait rejetés (Chailley, 1968, p. 442)."

35. The non-European representation (mostly from Africa) in the Assembly rose to 83 out of 627 members and to 71 out of 317 in the Senate.

36. For example, in the debate of Feb. 14, 1957: "C'est au Sahara que la France et l'Europe devront placer les rampes de lancement de fusées qui constituetont l'essentiel de leur sauvegarde. L'Afrique entière d'ailleurs - forteresse des puissances que l'adversaire s'efforce de pénétrer - l'Afrique entière est disposée par la géographie tout à la fois comme un indispensable relais entre des continents et comme un bastion placé face aux côtés menacés de l'Europe (Union Francaise, Débats, Feb. 14, 1957).

37. Although no statistics are available, African troops were not used extensively during the Algerian war. In Indochina they were used more often but apparently with mixed results.

38. Nor was this situation limited to Ghana. In Kenya as late as 1962 a British warrant officer, married, with three children and 12 years of service received a monthly pay of 60 pounds. His African colleague received only 15 pounds, 10 shillings.

39. See Nigeria, House of Representative Debates, March 18, 1953 and March 12, 1954.

40. Miners (1971) also points out these tests were more severe for Africans than for British candidates who did not have to pass two selection boards or attend Eaton Hall before going to Sandhurst.

41. After the Second World War French military schools were accessible to all French citizens from the overseas territories. But because of the small extension given to the concept of citizenship this provision was of little help to African recruits. On French military schools in Africa see Thompson (1960) and Lusignan (1969).

42. The 1959 annual report of the Federation complained that "Infantry Askari Signallers have had difficulty in attaining the required trade test standards owing to the general low standard of education (Central African Federation, 1959, p. 3)."

43. For a while military bases in Algeria were considered important when the French authorities were considering using the Sahara for atomic experiences.

44. On the whole military leaders, conscious of their image, were reluctant to be used on missions of law-and-order. According to a directive from the West African Command, the armed forces could be used only if the civilian government "declares that all resources at his disposal are insufficient and provided you have no reason for doubting this and are satisfied that the necessity in employment of armed forces had arisen and the time for it had arrived. Troops will not be used in the same way as police, i.e. in close contact with the crowd, nor should they use weapons other than for fire effect . . . troops will not be scattered, detached or posted in a situation where they would not be able to act in their own defence . . . they should shoot for effect at the centre of the body (West African Command, 1955)."

Ly (1957) reports that during the Fourth Republic African troops were used regularly to crush miners' strikes in the North of France.

45. See Great Britain, 1954 copy. This exclusive responsibility included:

(a) the provision, construction, maintenance, security staffing, manning and use of defences, equipment, establishment and communications; (b) the organization, armament, control, discipline, supplies transportation of Naval, military and Air Force units as well as any local volunteer or defence force; (c) the organization, control, discipline of the Gold Coast Police; (d) any other matter that he shall declare to relate to the naval, military or internal security.

46. In the words of Governor Noble at the opening of the Legislative Assembly: "The Government has decided that preliminary preparation should now be put in hand for the establishment on the attainment of independence of a Ministry of Defence and External Affairs and of an External Affairs Service. The Estimates which the Assembly will consider at this meeting include a vote for the selection and training of this service (Gold Coast, Legislative Assembly Debates, Feb. 15, 1955)."

In Nigeria, as in Ghana, the military forces became a separate entity on July 1, 1956, with their own commander and their own Headquarters staff working independently under the War Office. At the Constitutional Conference of 1957, an agreement was reached for the transfer on April 1, 1958, of financial and administrative authority over the armed forces from the United Kingdom Army Council to the Nigerian government. A defence Committee was created with the Governor as chairman and the federal prime minister, regional premiers, deputy governor, the commanding officer and two other ministers as members. On the question of the transfer of military authority in Nigeria see Bratton, (1962) and Miners (1971). Britain, although it had relinguished any financial responsibility for the Nigerian regiment, agreed to continue its

financial aid on a diminishing basis and to help with personnel and training facilities. In Sierra Leone the ministerial form of government was introduced in 1953 but with no provision for an African Minister of Defence. Under this new arrangement the Governor retained full policy-making and administrative power over the civil service, judiciary, finance, foreign affairs and defence questions. The latter two remained under his control until the day of independence even after primary financial and administrative responsibility for the armed forces had been transferred from the Army Council to the territory (Kilson, 1966). The same pattern, first experienced in the Sudan, is to be found in the constitutional history of Tanganyika, the Federation of Rhodesia and Nyasaland and even in those British territories which only recently acquired independence: Bechualand, Basutoland and Swaziland.

47. The existence of a large scale movement for national liberation in Kenya complicated the military picture in East Africa. The East Africa High Commission established in 1948 had an East African Defence Committee whose main responsibility apparently was to look after the development of the small Royal East African Navy established on July 1, 1950. In June 1953, East Africa was formed into a separate command so that more coordinated actions could be taken against the Mau-Mau movement. Only in 1957 were certain financial and administrative responsibilities transferred to the territorial governors. A General Officer, appointed by London, was to be responsible to the three governors for questions of command, operations, training and administration but remained directly responsible to the War Office for British personnel in the East African Land Forces. On defence planning for East Africa see Johns (1964).

48. Until 1945 French colonial troops came under the "overall" responsibility of the governors on whose territories they were stationed. But the Ministry of Colonies was responsible for the use and the financing of these forces (except in Tunisia and Algeria) while both the Colonial and War ministries were responsible for recruitment and general administrative procedures.

49. There was no doubt in De Gaulle's mind that military matters should continue to be the sole responsibility of the French Government and not of any territorial or community political structure: "La politique étrangère de la République Française et de la communauté est unique . . . L'armée chargée de la défense de la communauté est une (Carnoy, 1967, p. 277)."

50. In the 1950s, another Nigerian nationalist leader Azikwe also pressed for Africanization. During the war his newspaper, the West African Pilot, launched a campaign to convince Africans to enlist in the W.A.F.F. See Symonds (1966) and Miners (1971).

51. See Gold Coast, Legislative Assembly Debates, Oct. 13, 1952; March 3, 1954; Feb. 12, 1957; Nigeria, House of Representatives Debates, Nov. 21, 1958. In the French territories few written records were kept of the deliberations of territorial councils. No trace of debate on military matters could be found in the records of Guinea, Volta, Senegal of the Sudan.

52. The parliamentary debate reveled that few Gold Coast nationalist leaders had any idea what an army was. The bulk of the debate was centered not so much on the army itself but on the respective powers of the executive and legislative branches and on the regionalization policy of the C.P.P. government (See Gold Coast, Legislative Assembly Debates, February 12, 13, 14, 1957).

53. Some efforts were made to acquaint the politicians with the army in Ghana. For example, a few weeks before the Armed Forces Council was to be debated in the Legislative Council, members of the Council were treated to what a councilman described as a "wonderful display" (Gold Coast, Legislative Council Debates, Feb. 12, 1957).

54. The experience of Krobo Edusei, a C.P.D. Member of the Gold Coast Legislative Assembly is typical of the situation decried by other African political officials: "In 1951, when I went with a delegation to Britain, during the Festival of Britain, I had the opportunity of presenting a petition prepared by the Gold Coast ex-Servicemen to Field Marshal Slim in London, who was then the Commander in charge of all the Forces in the British realm. I discussed the treatment being meted out to the ex-Servicemen in this country to him and also the anomalies. I told him that many petitions had been sent to him through the local Commanders and the Governor. We then discussed petitions that had been presented to him and he gave me the assurance that so far as he was concerned he was going to see that everything that was good for the Gold Coast Military Forces was done. Upon my return, he wrote me a personal letter adding that he had referred the matter to His Exellency the Governor through the then Minister of Defence and External Affairs, Sir Reginal Saloway.

Later on I received a letter from His Excellency the Governor through Sir Saloway intimating that Mr. J.S. Annan, now Secretary of the Department of Defence, had been asked to investigate the whole matter and that he would submit his report shortly then. But that was the end of the matter. Laughter. Whether the findings of this officer were later on sent to the War Office for onward transmission to Field Marshal Slim, nobody knows (Gold Coast, Legislative Council Debates, March 17, 1956)."

55. This policy of limited access to the Force Publique was justified by the following reasoning:

> "Nous avons trop de respect pour le peuple congolais pour promouvoir ses enfants sans leur donner les connaissances indispensables à l'exercise de leurs futures fonctions. Nous avions trop d'aversion pour la démagogie et les faux-semblants pour nous livrer à un bâchage des nominations. Nous travaillions honnetement à former de véritables élites (Janssens, 1961, p. 53)."

56. According to Janssens this idea of independence for the Belgian Congo was a ridiculous idea: "C'est à partir de cette année 1954 que nous ne cesserons de voir les idées farfelues, propres aux politiciens qui vivent de divisions, s'insinuer (Janssens, 1961, p. 27)."

57. Colonel Afrifa of Ghana recalls his stay at Sandhurst Military Academy:

> I was thrilled by Sandhurst, the beauty of the countryside, and the calm Wish Stream which separated Sandhurst from the rest of the world. Sandhurst so far was the best part of my life -- learning to be a soldier in a wonderful and mysterious institution with traditions going back to 1802 . . . I entered Sandhurst as a boy and left as a soldier. There was no discrimination whatsoever (Afrifa, 1967, p. 49-50).

58. An extract from a Belgian report on the Force Publique confirms this lack of attention given to non-military activities:

> Le personel organique prévu pour l'éducation et le bien-être est réduit, mais il est secondé dans tous les camps par les commandants d'unités, les aumoniers, les assistantes sociales, les cadres européens et les épouses des officiers et des sous-officiers lesquelles s'occupent bénévolement du bien-être des militaires congolais et de leur famille (Belgique, 1952).

59. On the other hand, certain colonial officers came to believe that military service had created a new type of African. Carde, Governor General of French West Africa, during the inter-war period, the African veterans "have become conscious of the necessity for labour and discipline . . . Permeated with these ideas they return to the villages where they become the best auxiliaries of the Administration. The prestige which has come of their residence in France, their travels, their new acquaintances, and their former warlike character lead them to work in the general interest. They not only give advise, they preach by example (Buell, 1928, p. 19).

60. The major exception to this pattern of non-concern was Cameroun, where there was already widespread recognition of the need for a well equipped army to keep the guerilla activities of the Armée de Libération Nationale du Cameroun in check. See Johnson, (1970).

61. On the foreign policies of African states see Duroselle and Meyriat (1962), Thiam (1963, 1969) and Zartman (1966). A joint Mali-Dahomey communiqué published in October 1962 outlined five principles of African foreign policy: a) full respect of the political and economic structures of each state; b) non-intervention in the internal affairs of another state; c) keeping Africa unaligned with any political block; d) vigorous action against racial discrimination; e) peace through negociation thus excluding recourse to force as a solution to any conflict.

62. Only one country, Mauritania, was not immediately accepted by all members of the African community. Its right to an independent existence was seriously questioned by Morocco, but no forceful action was initiated to implement this claim.

63. In 1962, President Tsiranana made clear the decision to keep Madagascar fully involved in the western world: "Nous sommes intégrés résolument au Monde occidental, parce que c'est le Monde Libre, et que notre aspiration la plus profonde est la liberté de l'homme et la liberté des peuples (Chronologie Politique Africaine, Oct. 2, 1962)."

64. In answer to a question the Nigerian Minister of Defence Gwandu made it clear that for financial and organizational reasons the Nigerian government could not undertake such a move: "Conscription in the Royal Nigerian Army would involve large scale expenditure in equipment, accommodation and instructional staff which cannot be justified in present circumstances. The Army have as many volunteers as they need to maintain their strength at the level authorized by the legislature (Nigeria, Parliamentary Debates, April 4, 1961)."

65. On the Anglo-Nigerian and Anglo-Kenyan defence agreements, see Federation of Nigeria (1960), Colonial Office (1963a, 1963b), Secretary of State for Commonwealth Affairs (1968). The debates on the abrogation of these treaties were long and acrimonious, see Nigeria, Federal Parliament Debates, Nov. 21, 1961; Zambia, National Assembly Debates, Jan. 21, 1965; Kenya, Legislative Council Dabates, Nov. 30, 1961; Balewa (1964: pp. 49-51). On military assistance to Africa, see Lusignan (1969), Macdonald (1966), Crocker, (1968), Coward (1964), Bell (1965). Defence treaties and military agreements with France were often used by the leaders, mostly French officers, of the new national armies, to prevent effective Africanization of the officer corps.

For example in 1961, President Yameogo of Upper Volta had to reassure the French government as to the objectives of his military Africanization programme: "L'Africanisation des cadres en Haute-Volta, en particulier ceux de l'armée, n'est pas une mesure dirigée contre la France (Chronologie Politique Africaine, Nov. 1961, p. 14)."

66. However, disturbances in internal arrangements definitely contributed to the 1964 mutinies in East Africa. See Bienen (1965, 1968), Bomani (1964), Glickman (1964), Hopgood (1964), Mazrui and Rothchild (1969).

67. Such contacts were often initiated during pre-colonial days when African soldiers, dissatisfied with a chain of command controlled by expatriate officers, tended to complain directly to their M.Ps. See Gold Coast, Legislative Assembly Debates, March 17, 1956; Feb. 2, 1957.

68. These instructions were contained in a dispatch from General Salan: "J'insiste vivement pour qu'aux confins du Sahara vos officiers s'abstiennent de tentatives de ralliement qui, sans accroître votre potentiel militaire, justifieraient des réactions des gouvernements de la Mauritanie, du Niger et surtout du Soudan, et déclencheraient certainement des heurts entre nomades blancs et sédentaires noirs (quoted in Chaffard, 1965, p. 343)."

69. Tamboux, President of the Central African Republic National Assembly made clear his determination to use the army for civic projects: "il faut aussi qu'au sein de ce peuple pacifique qu'est le peuple centrafricain vous contribuez de façon efficace à la promotion de votre patrie. Il faut qu'avec nous vous soyez à l'avant-garde de la lutte contre le sous-développement économique de votre pays (Tamboux, 1964, p. 138)."

70. Nigeria, Congo, Cameroon, Mali, Chad and Sudan. In May 1966, the army also played an important role in the successful elimination of the Kabaka of Buganda by Prime Minister Obote of Uganda.

71. According to Lefever (1966) African countries made the following contribution to the United Nations operations in the Congo:

Country	% of the military sent to the Congo	Contribution in man-months
Ghana	32.7	39,203
Nigeria	26.7	63,617
Mali	18.6	2,292
Guinea	15.6	4,475
Liberia	12.8	(Unknown)
Ethiopia	8.9	119,226
Sierra Leone	6.9	1,610
Sudan	4.4	3,652

On the performance of African forces during the ONUC operations, see Alexander (1965), Lefever (1966), Van Horn (1966). Nor did the Belgians mercenaries hold a high opinion of the military capabilities of their African adversaries (Borri, 1962; Hoare, 1967; Roberts, 1963). The lack of both operational and administrative expertise of the African contingents was soon recognized by the U.N. high command which at no time employed more than two African officers at its Leopoldville headquarters, out of a total of 60 U.N. officers.

72. There were also political reasons for sending the Guinean troops to the interior, where their political militancy could do no harm. As revealed by Afrifa, (1967) Nkrumah had apparently failed in an attempt to force some officers to spy on their colleagues.

73. Apparently the Ghanaian officers did not understand the political and operational requirements of an operation like the ONUC one. According to Colonel Afrifa "there we were, soldiers in a strange land, supposedly sent into a strife-torn country to save lives, while the same people whose lives we were to save hooted at, booted, and assaulted us. What had gone wrong? For what were we losing our lives? (Afrifa, 1967, p. 66)." Nor did the Ghanaian officers understand of Nkrumah's Congolese policy. While his aim was to steer a middle course between the Monrovia and Casablanca groups, his officers suspected him of a diabolical plot: "his one ambition was to see a United Independent Congo which would eventually be a part of the Ghana-Guinea-Mali Union, with himself, Kwame Nkrumah, as the head-in embryo of the future Empire of Africa (Afrifa, 1967, p. 69)."

PART III

THE LEVEL OF MILITARY INTERVENTION:

THE ECONOMIC, SOCIAL AND POLITICAL ENVIRONMENT

CHAPTER IV

THE LEVEL OF POLITICAL INTERVENTION BY THE AFRICAN MILITARY FORCES, 1960-71: DEFINITION AND OPERATIONALIZATION OF A CAUSAL MODEL

In the preceding chapters it has been shown that, as the African armies underwent change from colonial to national status, their organizational boundaries tended to disintegrate and to become increasingly permeable by external factors. Having looked at the historical process by which military coups occur, Part III will try to identify those conditions in the political and socio-economic environment of African military organizations which facilitate this process and which determine the level at which it exists in the various countries. This attempt will necessitate the use of a different type of analysis, cross-national and quantitative rather than organizational and historical. The emphasis will be on the factors which facilitate the process leading to military intervention, rather than on a logical reconstruction of the process itself. This shift to a more abstract type of analysis also requires careful selection of a research strategy, which emphasizes the probabilistic nature of the phenomenon.

A preliminary assumption will be that military intervention in African political life is not a random process and that consequently it is possible and fruitful to identify those environmental

conditions which best predict the level at which military intervention will exist.[1] This assumption receives partial confirmation from a preliminary analysis of coups, attempted coups, and mutinies in the states of Tropical Africa. For example, the fact that such incidents have occurred in 20 of the 32 countries of Tropical Africa (Table IV) would appear to indicate that they are caused by at least some common factors.

Their chronological distribution also suggests that there is a definite sequence to their occurrence (Figure 2 and Table V). Mutinies, for example, occurred for the most part in the 1960-65 period while coups d'état (successful or unsuccessful) were more frequent in the latter period. Also, the fact that countries apparently akin politically or historically like Ghana and Guinea have not experienced the same frequency of military interventions suggests that the environmental forces which increase the probability of military intervention do not operate either indiscriminately or deterministically in all African countries.[2]

The rest of this chapter will seek to find an empirical measure of the level of military intervention and to identify and operationalize those environmental factors which are most likely to determine the extent of military intervention in each African country.

TABLE IV

NUMBER OF INCIDENTS OF MILITARY INTERVENTION BY COUNTRY (1960-71)

Country	Mutiny	Attempted Coups	Successful Coups	Total
Botswana	0	0	0	0
Burundi	0	1	2	3
Cameroun	0	0	0	0
Central African Republic*	0	2	1	3
Chad	0	0	0	0
Congo (Brazzaville)**	3	2	2	7
Congo (Kinshasa)**	6	1	2	9
Dahomey	0	1	5	6
Ethiopia	0	2	0	2
Gabon	0	1	0	1
Gambia	0	0	0	0
Ghana	1	2	1	4
Guinea	0	0	0	0
Ivory Coast	0	0	0	0
Kenya	1	0	0	1
Lesotho	0	0	0	0
Liberia	0	1	0	1
Malawi	0	0	0	0
Mali	0	0	1	1
Mauritania	0	0	0	0
Niger	0	0	0	0
Nigeria	0	0	2	2
Rwanda	0	0	0	0
Senegal	0	1	0	1
Sierra Leone	0	0	3	3
Somalia	0	1	1	2
Sudan	1	1	2	4
Tanzania	1	0	0	1
Togo	0	2	2	4
Uganda	1	0	1	2
Upper Volta	0	0	1	1
Zambia	0	0	0	0
Total	14	18	26	58

* Hereafter cited as C.A.R.

** Hereafter cited as Congo (B) and Congo (K), now Zaire.

FIGURE 2

DISTRIBUTION OF MILITARY INTERVENTION PER YEAR (1960-71)

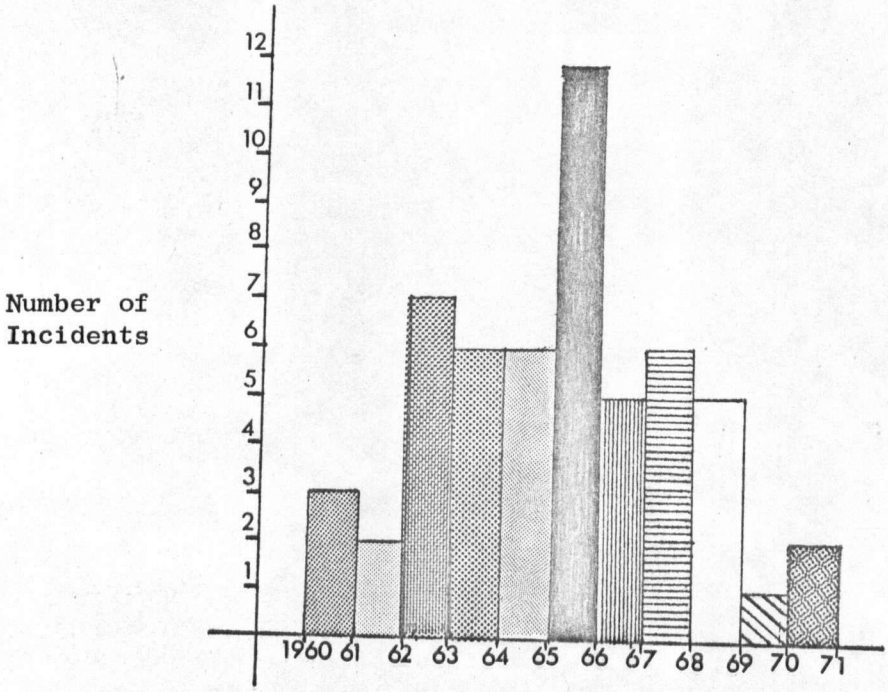


TABLE V

DISTRIBUTION OF INCIDENTS OF MILITARY INTERVENTION BY PERIOD AND TYPE (NUMBERS AND PERCENTAGES)

Type of Incidents	1960-65	1966-71	Total
Mutinies	10 (71%)	4 (29%)	14 (100%)
Attempted coups	8 (44%)	10 (56%)	18 (100%)
Successful coups	9 (35%)	17 (65%)	26 (100%)

The Measurement of Military Intervention

As indicated in Chapter I, the general trend in the literature has been to identify military intervention in the political process with the military coup d'état. The latter is usually defined as an illegal or forceful attempt by any segment of the armed forces to displace the existing political regime (Rummell, 1964).

On this basis, students of the military, notably Fossum (1967, 1968) and Hernes (1969), have developed indices of military intervention using coups, attempted coups, plots and mutinies as the basic units.[3] Although attractive because of its simplicity, this method of adding coups and other incidents of political activism by the military to produce an index of military intervention presents some serious epistemological difficulties.

First, if there have been no coups, attempted coups, or mutinies in a given country, then the military intervention score for that country will necessarily be nil. However, it is still possible to argue that military organizations resort to coups because they lack or have exhausted other avenues through which to make their influence felt. It follows that an army which has direct access to central political authorities or possesses a right of veto on government policies has no need for the most open forms of military intervention although this army should score high on any scale of military intervention in

the political process. A second difficulty relates to mutinies and the extent to which they should be considered as an indicator of military intervention. Of the 14 recorded mutinies in African armies, a majority can be regarded simply as strikes by the military for better pay, promotion systems and pension plans. In the case of the Tanganyika mutiny of January 1964, the mutineers made only two demands: higher pay and Africanization of the officer corps. As pointed out by Bienen (1965, 1969), throughout their action the mutineers refrained from making any political demands and from questioning the legitimacy or the competence of the political leadership. The same pattern characterized the Uganda and Kenya mutinies two weeks later.[4] Thus these events should not be considered as indicators of military intervention in the political process to the same extent as military coups are.

Third, the distinction between successful and attempted coups is often an artificial one depending on external factors. In 1964, the Gabonese army had successfully taken control of the political and administrative apparatus when, at the last moment, French paratroopers intervened to reinstall President M'ba. What had until then been a "successful" coup then became an "unsuccessful" one.

Fourth, many attempted coups and plots are often not reported in the press or are reported while in fact they did not occur at all except in the political machinations of national leaders. For example,

on February 5, 1963, five men were arrested in Liberia, including the Commander of the National Guard, Colonel Thompson, for an alleged conspiracy against President Tubman. No serious legal support was ever provided for that charge. In Guinea, alleged plots, military or not, have been a semi-annual event since 1959 with the latest one occurring in July 1971. Military regimes, notably in Dahomey, Togo and Upper Volta have repeatedly used "plots" and "attempted coups" as means of silencing an embarrassing opposition from within the armed forces.[5] Should these coups be counted in a measure of military intervention?

Fifth, mutinies, attempted coups, plots and successful coups do not necessarily belong in the same conceptual category. As has been shown, they have occurred at different periods (Table V): a fact which suggests that they may not be indicators of the same underlying phenomenon.[6] Finally, there is a serious bias in this technique of adding coups to obtain a measure of military intervention. Once the military have successfully seized political control over a country, and assuming that no serious internal rifts develop within the military junta, subsequent interventions in the form of coups will be nil, since they continue to be in full control of the political process without the need to stage a coup. Thus the measurement procedure used by Fossum, Hermes and others will necessarily under score the extent of military intervention in those countries which are already ruled by

the military. In Tropical Africa, for example, there was an average of 5.6 mutinies, attempted coups and successful coups each year between 1960 and 1966, compared with an average of only 3.8 incidents for the period 1966-71. On the basis of these figures it is possible to conclude that there has been a decline in the level of military intervention after 1965, when in actual fact the military have gained power in more than ten African states during the 1965-71 period.

Instead of adding the number of incidents of military intervention, the index of military intervention used in this study will attempt to measure the level and the facility with which a military organization moves outside of its traditional defence functions.[7]

This index is based on a rating assigned to each country for each year of the 1960-71 period, measuring the extent of military intervention in each country for each year. The rating is on a scale from zero to four, from least to most control.[8] The state-by-state and year-by-year ratings can be found in Table VI. The final index of military intervention in politics was arrived at by adding the yearly scores for each country (final column in Table VI).

An annual rating of zero was given to those countries in which the armed forces were either non-existent on any significant scale (Gambia) or confined to those functions assigned to them by the political

leadership. A rating of zero was also given to those armies which were engaged in limited pressure group activity on strictly military matters as in Nigeria during the 1960-65 period. Similarly, if military forces were used on law-and-order missions a rating of zero is given as long as such internal missions were decided upon by the civilian political leadership, as was the case in Cameroun, Mali and Nigeria.

At the other extreme, a yearly score of four was given to those countries where the armed forces were in complete and direct control of all major political institutions and where civilian groups, for example political parties, trade unions and interest groups, were either abolished, or reduced to instruments of the military regime. In Mali after the coup of November 1968, the new military leaders immediately disbanded the infrastructure of President Keita's dominant party. This infrastructure included the national and local committees for the defence of the revolution, the technical commissions of the party, popular militia, vigilante brigades, industrial revolutionary committees, the Malian Commission for Youth and the State Commission for Women. In Upper Volta, the first moves of Colonel Lamizana after his coup of January 1966 were to dissolve indefinitely the National Assembly, to suspend the constitution and to assume all legislative and executive powers until "republican institutions return to a normal functioning (Chronologie Politique Africaine, Jan. 5, 1966)." On January 13, 1966, a Consultative Committee was installed to advise Colonel Lamizana who,

TABLE VI

ANNUAL INDEX OF MILITARY INTERVENTIONS BY COUNTRY (1960-71)

Country	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	Total
Botswana	0	0	0	0	0	0	0	0	0	0	0	0	0
Burundi	0	0	0	0	0	2	2	4	4	4	4	4	24
Cameroun	0	0	0	0	0	0	0	0	0	0	0	0	0
C.A.R.	0	0	0	0	0	0	4	4	1	4	4	4	24
Chad	0	0	0	0	0	0	0	1	4	1	1	1	5
Congo (B)	0	0	0	3	3	3	3	3	4	4	4	4	31
Congo (K)	2	1	1	1	1	3	4	3	3	3	3	3	28
Dahomey	0	0	0	2	2	3	4	4	3	4	4	3	29
Ethiopia	1	1	1	1	1	1	1	1	1	1	1	1	12
Gabon	0	0	0	0	2	1	1	1	1	1	1	1	9
Gambia	0	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	4	4	4	3	3	1	19
Guinea	0	0	0	0	0	0	0	0	0	0	0	1	1
Ivory Coast	0	0	0	0	0	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	1	0	0	0	0	0	0	0	1
Lesotho	0	0	0	0	0	0	0	0	0	0	0	0	0
Liberia	0	0	0	1	0	0	0	0	0	0	0	0	1
Malawi	0	0	0	0	0	0	0	0	0	0	0	0	0
Mali	0	0	0	0	0	0	0	0	3	4	4	4	15
Mauritania	0	0	0	0	0	0	0	0	0	0	0	0	0
Niger	0	0	0	1	0	0	0	0	0	0	0	0	1
Nigeria	0	0	0	0	0	0	4	4	4	4	4	3	23
Rwanda	0	0	0	0	0	0	0	0	0	0	0	0	0
Senegal	0	0	1	0	0	0	0	0	0	0	0	0	1
Sierra Leone	0	0	0	0	0	0	0	4	3	1	1	1	10
Somali	1	1	1	1	1	1	1	1	4	4	4	4	20
Sudan	4	4	4	4	4	3	3	3	3	4	4	4	44
Tanzania	0	0	0	1	0	0	0	0	0	0	0	0	1
Togo	0	0	0	2	2	2	4	4	4	4	4	4	30
Uganda	0	0	0	0	1	1	1	1	1	1	1	4	11
Upper Volta	0	0	0	0	0	4	4	4	4	4	4	4	28
Zambia	0	0	0	0	0	0	0	0	0	0	0	0	8
Total	8	7	8	17	18	24	40	46	51	51	51	51	

in the meantime, had become President of the Republic, President of the Council of Ministers and Minister of Defence, Veterans Affairs, Information, Youth Activities and External Affairs. In September 1966, all political activities were banned and the four major political parties were asked to limit their activities to so-called non-political controversial areas. Trade unions were also asked not to promote dissension within the population. In the Congo (K), General Mobutu at first asked Parliament to formally approve his coup but five months later reduced its role to that of a consultative body. Seizing upon an unpopular teachers' strike, Mobutu later abolished the right to strike in both the private and public sectors. All these cases constitute examples of military organization, or part of it, in full control of the political process.

At the intermediate level, a score of three was given when the armed forces although no longer in complete control of the political process, nevertheless retained a predominant voice or a veto right over the conduct of the civilian leaders. This was the case in Ghana in the first two years after the return to civilian rule. In October 1969, a civilian government was reinstalled with Dr. Busia as its elected Prime Minister, but three officers continued to act as a Presidential Commission.

When the military, often in a post-coup situation as in Dahomey and Togo, managed to retain an important influence in government affairs, although not a veto power, a rating of two was given. Finally,

the score of one served to characterize momentary outbursts of military intervention in the political process, mutinies and attempted coups which resulted in only a temporary influence by the military over the political process.

This scoring method is naturally not infallible, especially since 384 individual judgments have to be made. Like any scoring system, it involves a trade-off between validity and reliability.

First, the arbitrary and subjective character of the ratings must be recognized. Although detailed case studies of each African country were used as guidelines, the final decision as to the assignment of a score of one, two, three or four remained a subjective one. No independent check on the plausibility of the scale was performed since no other attempts to measure the level of military involvement in Tropical Africa have been published.

Second, there is the problem of the time span over which a military intervention took place. What score should be given a country where the military played only a secondary role (score of one) until June and then decided to seize all political powers (score of four)? Of course, the shorter the time interval the easier it is to make such a decision. After considering a six-month interval, the one-year unit was used for two reasons: (1) a majority of the coups which signalled

a remarkable change in the level of military intervention in politics occurred in the December to February period, thus facilitating the rating process; (2) the use of a six-month interval would not have made the rating process more accurate since an arbitrary decision would still have been needed for those coups which occurred in March or September. A six-month interval was nevertheless used as an alternative time unit. The index of military intervention using the six-month time unit correlated at the .94 level with the index using a one-year interval. As a rule, the scores given in Table VI represent the most accurate score for the longest portion of the year in question.

The advantages of this scaling technique are more apparent when its results are compared with those obtained by giving successful coups a score of five points, an unsuccessful coup a score of three points and a mutiny a score of one point. (Appendix I gives the list of these various types of incidents and their annual distribution.) Both indices of military intervention are reported in Table VII. The index constructed with the 0, 1, 2, 3, 4 scale (method A) allows for the construction of a more discriminatory and less skewed index. For example, Chad and Niger are no longer considered as totally free of military intervention as they are in the index constructed with the 5, 3, 1 scale (method B). Second, method A has 17 different scalar positions versus 13 for method B, also contributing to a smaller number of ties on the scoring index. Third, method A makes for a more stable

TABLE VII

LEVEL OF MILITARY INTERVENTION BY TWO SCALING METHODS

Country	Index of Military Intervention using Method A*	Index of Military Intervention using Method B**
Botswana	0	0
Burundi	24	13
Cameroun	0	0
C.A.R.	24	11
Chad	5	0
Congo (B)	31	19
Congo (K)	28	19
Dahomey	29	28
Ethiopia	12	6
Gabon	9	3
Gambia	0	0
Ghana	19	12
Guinea	1	0
Ivory Coast	0	0
Kenya	1	1
Lesotho	0	0
Liberia	1	3
Malawi	0	0
Mali	16	5
Mauritania	0	0
Niger	2	0
Nigeria	23	10
Rwanda	0	0
Senegal	1	3
Sierra Leone	10	15
Somali	20	8
Sudan	44	11
Tanzania	1	1
Togo	30	16
Uganda	11	6
Upper Volta	28	5
Zambia	0	0

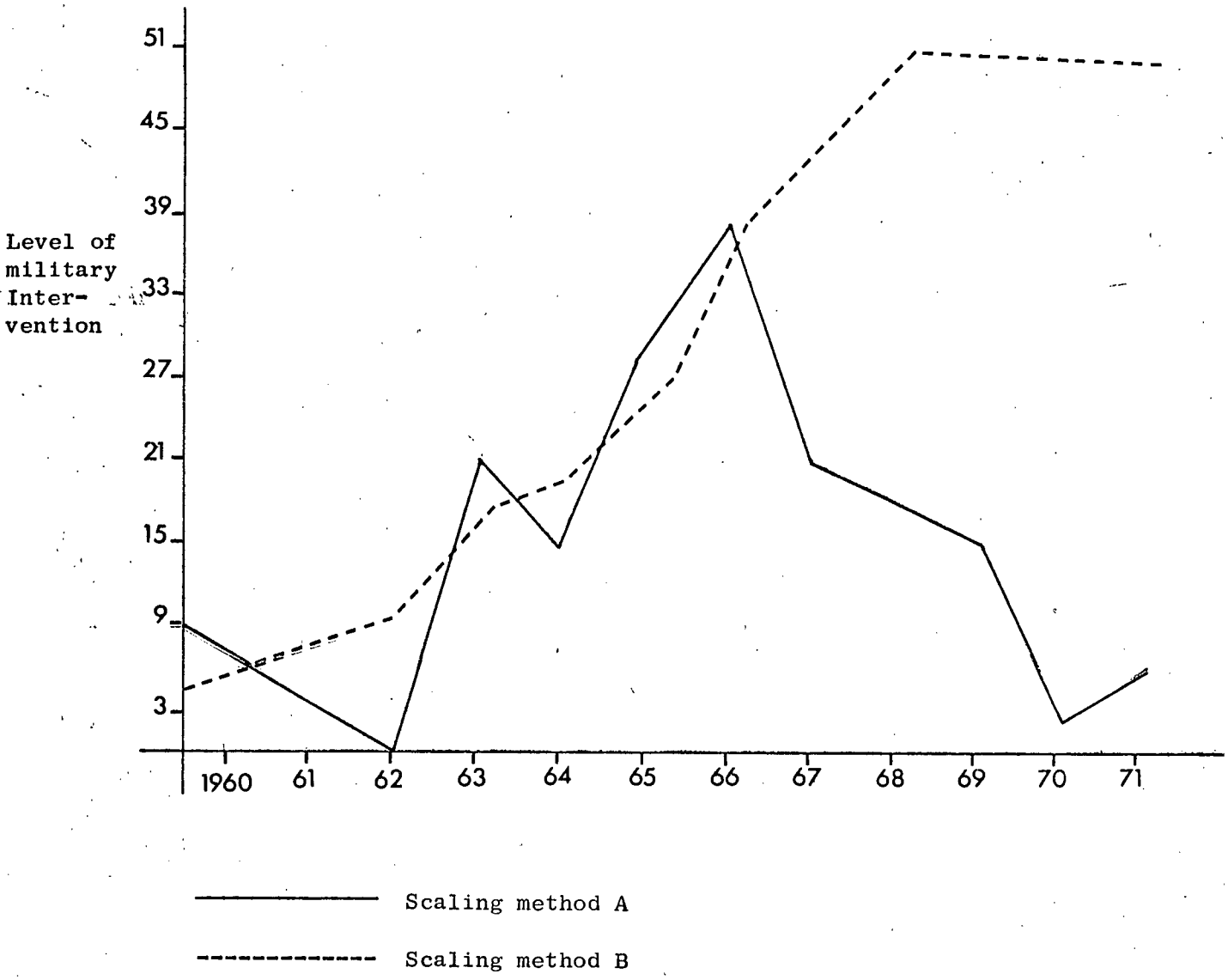
* For each country and for each year, the level of military involvement in politics is assessed in the following way: full control = 4 points; veto right = 3 points; important role = 2 points; occasional influence = 1 point; no role = 0 point. The Final Index is the sum of all the annual scores for each country.

** For each country a coup = 5 points; an attempted coup = 3 points; a mutiny = 1 point. The Final Index is the sum of all the points for a country over the 1960-71 period.

index, less sensitive to occasional and non-consequential incidents of military intervention. In the case of Burundi, the Central African Republic, Mali, Nigeria, Togo and Upper Volta, method A gives these countries an overall score which is considerably higher than the score obtained through method B, thus reflecting more accurately the high level of military intervention which followed the entrenchment of military regimes. Sierra Leone, on the other hand, underwent the reverse process. This reversal underlines the fact that the high score attained with method B was simply the result of a number of coups in succession and not of any lasting military intervention in the Sierra Leonese political process. Also, method A is evidently more accurate in representing the Sudanese situation where the army was already firmly in control by 1960, a fact which is ignored in method B. Finally, a comparison of the annual distribution of the level of military intervention for all the countries considered, as measured by the two indices (Figure 3), might be useful. After 1966, the curves for the two indices are apparently measuring two different phenomena. This is understandable since method B simply adds the number of times African military organizations (or factions of them) have felt it necessary to resort to open military coups and mutinies against the existing regime. Method A, on the other hand, measures the level of political control exerted by the military organizations over a ten-year period. For these reasons we have selected the set of scores arrived at through method A as our index of the level of military intervention.[9]

FIGURE 3

DISTRIBUTION OF THE ANNUAL LEVEL OF MILITARY INTERVENTION FOR TROPICAL AFRICAN COUNTRIES; USING TWO SCALING METHODS



Having developed an index to measure the level of military intervention in the political process of the 32 countries of Tropical Africa, the next task is to identify and operationalize the independent variables, i.e. the environmental factors likely to determine the extent of military intervention in each country.

The Identification of the Environmental Factors

Any attempt to describe the African environment involves consideration of an infinite number of factors: social, cultural, economic, religious, demographic, geological, climatic and so on. All these factors influence the African condition, but all do not have the same impact on African military organizations and subsequently do not have the same causal importance in attempting to explain the level of political intervention by these organizations. It will be assumed that the level of military intervention in the political process is influenced only by those factors which have a political, social and economic dimension. This assumption eliminates from our analysis a large number of factors which are only very indirectly related to military coups, for example, climatic and geological conditions. However, other factors cannot easily be eliminated, for example, anthropological features such as patterns of land tenure and lineage descents, religious and demographic data, cultural traits and most important, tribal composition. The decision not to incorporate these factors in this analysis rests on two aspects, both of which are essentially

pragmatic and non-theoretical in nature. First, it is impossible to obtain reliable and valid empirical information for many of these factors; and second, a preliminary quantitative analysis such as this must be limited to a few variables. Consequently, it is felt that variables such as the size of the population and its religious composition should not be included in our model since they do not describe important changes in the African environment and as such were unlikely to contribute significantly to a causal explanation of the level of military intervention.

Instead six factors which describe some but not all the important dimensions of the African environment were selected as potential parameters of the level of military intervention in the states of Tropical Africa. They are:

(1) The level of economic development;

(2) The level of social mobilization;

(3) The level of political participation;

(4) The level of political institutionalization;

(5) The level of government penetration;

(6) The level of internal conflict.

To some extent these six factors can be seen as theoretical components of what is called development theory in contemporary political science.[10] Although not entirely accidental, this fact should not be taken as a sign of the existence of a carefully elaborated

conceptual apparatus. It should be stressed that there is no single theoretical rationale for including these particular variables and excluding others.[11] We selected those environmental factors on which we were likely to possess empirical information and which were most often mentioned in the literature reviewed in Chapter I as causal parameters of the level of military intervention.

1. The level of economic development and military intervention

In discussing the possible links between economic development and the level of military intervention, a distinction must be made between the level and the rate of economic development. There are grounds to believe that in the short run a high rate of economic development contributes positively to a high level of military intervention in the political process. Olson (1963) and others suggest that rapid economic growth creates a host of nouveaux riches who naturally seek to increase their political power.[12] At the same time a high rate of economic development also creates the conditions which encourage this search for power, since it tends to deepen regional disparities, disrupt traditional social and economic groupings and increase geographical mobility. Thus, in the short term a high rate of economic development can serve to encourage the military to intervene to protect their own corporate interests under the pretext of restoring domestic peace.

On the other hand a high level of economic development has been regarded as responsible for a low level of military intervention. Huntington suggests that a high level of economic development:

> tends to reduce social frustrations and the consequent political instability . . . creates new opportunities for entrepreneurship and employment and thereby diverts into money-making ambitions and talents which might otherwise go into coup-making (1968, p. 49)[13]

Germani and Silvert (1961) argue that a high level of economic development especially of industrialization strengthens the middle strata and increases its stake in maintaining a political status quo which could be seriously disturbed by a military takeover. According to Alexander, the ways in which the rise of a middle class inhibits military intervention are both direct and indirect.

> Of course, the middle classes are no match for naked force, but they have means of preventing a resort to such force by bringing behind-the-scenes social pressure to bear on the military and by conducting national economic affairs in such a way as to prevent the development of the kinds of crises which military men so often exploit . . . through the increasingly large numbers of their class who are now entering the army as officers . . . /through/ the trade union movement which has come into existence with the growth of the urban working class . . . /by/ lessening the power of the old aristocrativ landowning classes to resist change . . . it makes the military less willing to be the principal prop of the economic and social status quo (1958, p. 158).

Fossum (1967) found some verification for this negative relationship between the level of economic development and the level of military intervention by showing that in Latin America "the relative frequency

of coups is greater for the relatively poorer countries in all periods (1967, p. 231)."

In Africa, however, both a low level and a low rate of economic development have been associated with a high level of military intervention. Welch (1967) points out that economic stagnation was the immediate cause of the coups in Dahomey and Upper Volta.[14] Hippolyte (1968) suggests that the low level of economic development "increases the vulnerability of African countries to military intervention (1968, p. 44)" by making it necessary for the political authorities to adopt unpopular austerity measures which prompt the military to intervene in order to maintain social peace.

In justifying their actions, African officers often mention the economic factor as a key element in their decision to intervene. In Mali, the army lieutenants who ousted President Keita in November 1968 insisted on the government's total incompetence in economic matters as one reason for their action.[15] In Ghana, Nkrumah was held responsible by the military for following a myopic agricultural programme, including ideologizing the Farmers co-operative, a ludicrous programme of state farms, chaos in the agricultural mechanization programme, the erosion of real income, raising taxes, causing an increase in prices, lacking efficient planning and for systematic corruption (Afrifa, 1966, pp. 87-92).[16] In his first press conference after the 1966 coup, in the Central African Republic, Colonel Bokassa listed 30 reasons for the

army's intervention. At least ten of them had direct, if often contradictory, economic connotations: the mandatory savings bond programme, corruption among the civil servants, the absence of funeral homes, the recent cut in the salaries of civil servants, the suppression of travel indemnities, the exaggerated salaries of civil servants, and the empty national treasury (Semaine Africaine, Jan. 15, 1968).

On the basis of these testimonies and the history of African military forces discussed in Chapter III, we will hypothesize that a low level of economic development (defined here as including both the level and the rate of development) increase significantly the level of military intervention. It will usually force the political authorities to further decrease financial support of the armed forces and in some cases will suggest the possibility of transforming these forces into national civil project brigades. These policies are usually clearly unacceptable to the military, which often prefers to intervene to ensure its survival. Also, a low level of economic development tends to increase the army's confidence that its intervention will be well accepted by the population and that it can do a better job than the politicians in running the economy. We formulate this hypothesis conscious of the fact that a number of observers have also hypothesized that a high rate of economic development may be conducive to a high level of military intervention.

Causal analysis will hopefully make it possible to test this hypothesis by: identifying the impact of the level of economic development on the level of military involvement in the African political process; by assessing the strength of this relationship, positively or negatively; by controlling the possible impact of other variables, particularly the level of social mobilization, which might possibly influence the original relationship between the level of economic development and the level of military intervention. But before we can test this hypothesis, we must elaborate a theoretical and an operational definition of the concept of economic development.

The wide acceptance by social scientists of the per capita G.N.P. as an indicator of the level of economic development should not obscure the difficulties involved in the definition of this concept, especially in the African context.[17] Kindelberger (1965) suggests that a distinction be made between economic growth defined as "more output" and economic development which implies "both more output and changes in the technical and institutional arrangements by which it /output/ is produced (p. 3)." Higgins sees economic

development not so much as a question of increased output but of maximization of "the rate of expansion of production while giving due weight to people's wishes regarding the choice between goods and services or leisure, between more income now and more income later, and between a higher per capita income and larger families (1959, p. 630). " Letwin (1964) warns against the analytical fallacy of regarding economic development solely from a relational point of view. The fact that country A is developing more rapidly than country B should not be taken as meaning that country B is not developing at all. Finally Rostow (1960) points out that most definitions of "economic development" put too much emphasis on the adjective, economic, and not enough on the noun, development. Having identified five types of society with regard to the production of goods, he suggests that economic development takes place whenever a society is moving from one stage to the other.

In this study economic development will be defined as the process of change which maximizes the performance of the economic sector as measured by an increase in the economic input and output, and by the establishment of a more complex and diversified production sector so as to insure increased benefits for the citizens. Let us briefly consider the components of this definition.

A collectivity cannot hope to increase the welfare of its citizens and to maintain an adaptive relationship with its environment if its population grows more rapidly than its production of goods and services. An increased economic output, and the corollary increase in economic input are thus the first conditions of any economic development. However, economic development should not be reduced to a simple overall increase in the input and output. It also implies a constant re-arrangement of the terms under which this input is transformed into output. To develop an economy must become increasingly complex and diversified. It needs to acquire an industrial base without, especially in the case of Africa, sacrificing the agricultural sector. At the same time, the structure of the economic output must acquire more autonomy so as to be less dependent on external conditions (world markets, foreign creditors. Without this autonomy, an economy may still grow and increase its output but it is unlikely to develop. Finally, economic development is not only a structural phenomenon involving processes and production parameters. In our definition of economic development, we should be concerned not only with the quantity and quality of the economic input and output but also with the extent to which this output is translated into more benefits for the entire population.

These five aspects (increased input, output, complexity, autonomy and benefits) constitute the theoretical components of one possible definition of economic development. Another definition would yield a different set of components. Our next task is to identify the empirical indicators corresponding to each of these five aspects (Table VIII).

The amount of capital (both private and public) invested annually in the economy can be taken as a good indicator of that country's economic input for that year. Of course other factors (labour, technology, research and development programmes) also contribute to determine the level of economic input, but in Africa their importance, according to Cisse (1969) and Vinat (1968) is only peripheral. Economic output on the other hand was defined by the quantity of goods and services produced annually by the economy of a given country. Thus we have not taken into account as suggested by Balandier (1962) and Loken (1969) the human and social costs of this production of goods and services (pollution, anxiety, stress, depletion of natural resources, and alienation).

The development of an efficient agricultural sector and the extent to which the country has developed a viable industrial sector and has reduced the predominance of agricultural activities were taken as empirical indicators of the third aspect of

TABLE VIII

THEORETICAL, EMPIRICAL AND OPERATIONAL ELEMENTS IN THE DEFINITION OF THE LEVEL OF ECONOMIC DEVELOPMENT

Theoretical Components	Empirical Definition	Operational Indicators *
Increased economic input	Increase in the investment of private and public capital	V1 Money deposits, 1963 V2 Paper money in circulation, 1963 V3 Investment as percentage of GDP, 1960 V4 Investment per capita, 1960
Increased economic output	Increase in the quantity of goods and services produced	V5 Consumer prices, 1965 V6 GDP per capita, 1958 V7 GDP per capita, 1963 V8 GNP per capita, 1967 V9 GNP per capita, 58/63 V10 GNP factor prices, 1968 V11 GNP per capita, 61/68
Increased complexity of the economic sector	Development of an efficient agricultural sector	V12 Percentage in agriculture, 1958 V13 Agriculture production, 1960 V14 Agriculture production per capita
	Development of an industrial base	V15 Electricity production, 68/63 V16 Commercial emergy, 1966 V17 Electricity production, 1965 V18 Energy consumption, 1963 V19 Energy consumption, 1965 V20 Percentage of wage earners, 1963 V21 Percentage of civil servants V22 Number of possible industrial types V23 Possibilities of economic growth

TABLE VIII (Cont.)

Theoretical Components	Empirical Definition	Operational Indicators *
Increased autonomy of the economic sector	Increase in the independence and diversification of the production	V24 Trade with metropole, 1962 V25 Balance of trade, 1965 V26 Trade as % of GNP, 1968 V27 Trade composition, 1968
Increased benefits for the population	Increase in the social welfare and in the standard of living of the population	V28 Inhabitants per doctor V29 Increase in doctors, 60/63

*A more complete definition of each indicator can be found in Appendix II.

economic development, i.e. the increased complexity of the production sector. Similarly, the diversity and independence of the production sector were taken as empirical correlates of the autonomous character of a country's economy. Finally, the well-being of a population was taken as a valid indicator of the theoretical notion of benefits.

This theoretical and empirical definition of the notion of economic development can be criticized from a number of viewpoints. First, it sees economic development mostly in terms of production and output, and not in terms of the modes of production. Amin (1966, 1967) has shown in his studies of North Africa and of the Ivory Coast that in the so-called developing countries the capitalist modes of production constitute in fact one of the major obstacles to real economic development. The capitalist mode of production, he maintains, because of its needs for capital and technology, encourages dependency on external agents and thus brings about economic growth but not economic development. Second, because of our desire to engage in causal modelling, we may have overemphasized the quantifiable aspects of the process of economic development. Van der Eycken and Van der Vorst (1967) in their study of the Congo (K) and Hugon (1968) in his analysis of the Cameroun economy have stressed mental attitudes as one important component of economic development. Similarly, Gaud (1967) has underlined the importance of planning to create a balanced process of

economic development. Finally, our definition of economic development evidently emphasizes the modern industrial sector to the detriment of the more traditional rural and agricultural sectors of African economic life. Recently a number of authors (Hugon, 1968; Meister, 1966a, 1966b; Dumont, 1966; Vallas, 1968) have criticized this emphasis on industrialization by pointing out that the process of economic development in Tropical Africa rarely depends upon industrialization beyond the mineral extractive industries. As stated by Boudhiba

> Le plus gros du labeur africain est consacré à une production essentiellement vivrière, dans le cadre d'une économie largement démesurée d'auto-consommation ou de subsistance. Ne nous faisons pas d'illusion, la promotion du paysan est, en Afrique, le plan incliné par lequel passe nécessairement tout développement cohérent et sain (1971, p. 16).

Nevertheless, these authors and others (Amin, 1969; Aydolot, 1968; Dethine, 1961; and Lacroix, 1967) recognized that in the end there can be no economic independence and no economic development without a strong industrial sector. A strong agricultural sector, they maintain, should not be seen as a goal in itself, but as the first step towards industrialization. Thus industrialization should constitute an important parameter of the economic development process.

Having identified some of the epistemological limitations of our definition of economic development, the next step in our procedure is to operationalize these theoretical components and their empirical correlates by selecting those statistical indicators which reflect with a maximum of validity the complexity of each aspect of the overall process of economic development. Much of the credibility and utility of these findings will depend on the agreement between the theoretical definition of the concepts and their operationalization. In other words: how can the "level of economic development" be measured.

Most of the data used in this study were collected by the African National Integration Project of Northwestern and York universities. This research team made available a data bank of 322 variables of a social, economic and political nature. To this bank were added 130 variables collected from the following data sources: the African Research Bulletin, the African Diary, the African Recorder, L'Année Africaine and Chronologie Politique Africaine. Data were collected for the following countries of Tropical Africa: Botswana, Burundi, Cameroun, Central African Republic, Chad, Congo (B), Congo (K), Dahomey, Ethiopia, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Malawi, Mali, Mauritania, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somali, Sudan, Tanzania, Togo, Uganda, Upper Volta and Zambia. Countries from Northern and Southern Africa were excluded.

The impressive number (462) of empirical variables assembled should not obscure the poor quality of the data. In fact, the unreliability of much of this information has necessitated the use of a specific methodological instrument to offset some of its major distortions.

The task of operationalizing the concept of economic development and the five other independent variables will have to take into account this poor reliability of available information. In fact, for no other region, including Latin America, is the reliability of statistical information so poor as in Africa due to the combined effects of a number of error sources.

The first type of error stems from government censorship or from distorted newspaper reports. United Nations statistics, which for the most part are assembled from information submitted by national governments, are particularly vulnerable to such distortions.

The second source of error is less intentional in its origin. For many aspects of African social life there is no reliable measure for the very simple reason that the exact information is not yet available. For example, the population of Nigeria in 1967 is estimated at 43 millions by the United Nations and at 61 millions by the World Bank.

A third type of error results from the cross-national and cross-sectional nature of this study. The reliability of certain measures varies, depending on the time and the countries in which they are taken. For example, when one is using official national statistics, it is safe to expect that the G.N.P. is not calculated the same way in Ghana as in Mauritania and that even for the same country it does not include the same input in 1960 as in 1968. This makes comparisons across countries and across a period of time a perilous enterprise at best.

Consequently, although indicators which in European and North American countries could be considered as reliable estimates of the variables in question will be used, expectations in this case should be much lower. To increase the reliability of these measures, whenever possible, multiple indicators of the same variable have been used.

There is also another reason why we have used multiple rather than single statistical indicators. The nature of the six independent variables is such that no single indicator can validly reflect their complexity. By definition, variables such as "the level of economic development" or "the level of social mobilization" are composite variables. Economic development, as we have seen, includes at least five components. As such, it cannot be adequately measured if indicators that measure only one of these dimensions are used. This single-indicator procedure is used by Tanter (1967) in his study of the social correlates

of political development where the "G.N.P. per capita" serves as the sole measure of economic development. This procedure does not take into account the intrinsic complexity of these concepts. Multiple indicators, although they create additional methodological difficulties, provide us with a more valid instrument. The present procedure involves two distinct steps. First, to identify and aggregate those multiple indicators for each of the independent variables. Second, to derive a score for each country on each of the aggregated variables. As a first step, a list of indicators was selected from the data bank which related in one way or another with the economic sector. Table VIII lists and classifies the 29 statistical indicators according to their relationships with each of the five theoretical aspects of economic development identified earlier. This collection of indicators is clearly not complete. There are no indicators dealing with regional disparities, secondary industries, salary structures, productivity, private investments, research and development, and with foreign aid. Also, certain dimensions of the economic development process are only partially operationalized. For example, economic independence and diversification is operationalized solely in terms of characteristics of external trade. Nevertheless, taken as a whole these 29 indicators constitute a more valid and reliable approximation of the level of economic development than "G.N.P. per capita" which is so often used as the single indicator of economic development. Having selected a set of economic indicators, the next task is to aggregate them in a single index of economic development.

This set of indicators was submitted to a rotated factor analysis (Table IX).[20] The results reported in this table are by no means immediately appealing but this random distribution of high loadings reveals more than a total absence of internal coherence. Clearly Factor I is the most important. Not only does it explain 40.3 per cent of the common variance but it also regroups 54 per cent of the high loadings. Second, only this factor registers one or more high loadings in every one of the five "conceptual dimensions" of what has been theoretically defined as economic development. Apparently, when a wide variety of indicators are submitted to a factor analysis, several factors can be extracted but only one is at the same time intelligible and conceptually relevant to all aspects of economic development. For these reasons, it seems safe to label this factor and the indicators which define it, as the "level of economic development syndrome".

As a further test of the validity and of the unidimensional character of this syndrome, a second factor analysis was performed, using only those indicators which scored highly on the first factor analysis. First, those indicators which are so highly correlated that they are in fact nothing but different dimensions of the same variable were eliminated. Table X lists

the correlation coefficients between the 12 indicators with the highest loadings on Factor I. This table clearly reveals the close connections between these 12 indicators since only 11 correlations out of a total of 72 have coefficients lower than .50 (15.3 per cent of all correlations). By comparison, in the 34 x 34 matrix, where all indicators are intercorrelated, 472 out of 544 coefficients are lower than .50 (86.5 per cent). Obviously, factor analysis demonstrates that seemingly complex patterns amongst our 544 correlations may in fact be reduced to a mere six basic factors.

Table X also indicates that the last four indicators (V6, V7, V8, V10) should be considered interchangeable measures of the same variable. Their correlation coefficients vary from .88 to .96. To prevent these four indicators from overly weighting the second factor analysis, only one indicator, the G.N.P. per capita in 1958 was retained.

The results of the second rotated factor analysis, using only the nine indicators with high loadings on Factor I of the first factor analysis are given in Table XI. It was hoped that this further factor analysis would reveal that at least 60 per cent of the variance in the nine indicators could be explained by one factor and that no other factor made a significant explanatory contribution. This is clearly the case in Table XI. Each indicator loads highly on this first unrotated factor and it alone accounts for at least 60 per cent of the variance in the nine indicators.

TABLE IX

ROTATED FACTOR MATRIX OF THE INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT*

Indicators of the level of Economic Development	Factors					
	I	II	III	IV	V	VI
Indicators of economic input						
V1 Money Deposits, 1963	(82)	06	-12	23	17	23
V2 Paper Money in circulation 1963	(75)	04	-18	-21	10	04
V3 Investment as % of GDP, 1960	37	-12	04	08	10	-04
V4 Investment per capita, 1960	(53)	-18	-27	-06	-18	-(61)
Indicators of economic output						
V5 Consumer Prices, 1965	-25	-08	01	00	-(82)	13
V6 GDP per capita, 1958	(85)	01	-14	-10	-23	01
V7 GDP per capita, 1963	(82)	00	-12	-05	-26	-11
V8 GNP per capita, 1967	(73)	08	-30	-26	-13	-32
V9 GNP per capita, 58/63	00	24	-16	-23	16	-(76)
V10 GNP factor prices, 1968	(80)	-03	-18	-24	-07	-36
Indicators of economic complexity						
V12 Percentage in agriculture, 1958	-(67)	-36	-01	-23	48	02
V13 Agriculture production, 1960	03	08	00	-(71)	-08	-04
V14 Agriculture production per capita, 1969	18	-08	-23	-(91)	01	-28
V15 Electricity production, 68/63	19	10	14	-09	-(53)	10
V16 Commercial energy, 1966	25	23	-(99)	-33	-08	02
V17 Electricity production, 1965	28	07	-(89)	-01	10	-17
V18 Energy consumption, 1963	(60)	06	-(72)	-07	01	-18
V19 Energy consumption, 1966	(78)	03	14	-06	00	-07
V20 Percentage of wage earners, 1963	(80)	01	-25	08	05	18
V21 Percentage of civil servants, 1966	-38	-05	04	21	-13	-14
V22 Number of possible industrial types	31	(76)	-21	-21	08	08
V23 Possibilities of economic growth	-(54)	44	03	05	-18	24

TABLE IX (Cont.)

Indicators of the level of Economic Development	Factors					
	I	II	III	IV	V	VI
Indicators of economic autonomy						
V24 Trade with metropole, 1962	21	-13	12	13	-15	-05
V25 Balance of trade, 1965	15	-12	-(69)	13	47	-31
V26 Trade as % of GNP, 1968	(67)	-26	-30	01	19	-24
V27 Trade composition, 1968	01	35	22	-28	31	38
Indicators of social welfare						
V28 Inhabitants per doctor	-(72)	-11	09	07	-13	22
V29 Increase in doctors, 60/63	39	26	-23	32	02	25
Percentage of common variance	40.3	24.2	13.5	9.4	8.2	5.7
Percentage of total variance	30.8	18.5	9.4	7.2	6.2	4.4
Cumulative percentage of total variance	30.8	49.3	58.7	65.9	72.1	76.5

* Factors loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

TABLE X

CORRELATIONS BETWEEN 12 INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT

Indicators	V1	V2	V6	V7	V8	V10	V12	V18	V19	V20	V26	V28
V1	-											
V2	.66	-										
V6	.57	.68	-									
V7	.52	.64	.96	-								
V8	.45	.68	.69	.95	-							
V10	.47	.66	.88	-.40	.95	-						
V12	.62	-.39	-.52	-.48	-.40	-.40	-					
V18	-.72	.66	.68	.65	.77	.71	-.39	-				
V19	.52	.45	.67	.66	.51	.63	-.47	.55	-			
V20	.72	.66	.73	.74	.62	.68	-.47	.60	.55	-		
V26	.51	.61	.54	.56	.59	.67	-.24	.57	.52	.57	-	
V28	-.55	-.61	-.59	.54	.58	-.63	.46	-.59	-.62	-.55	-.65	-

V1 Money deposits, 1963
V2 Paper money in circulation, 1963
V6 GDP per capita, 1958
V7 GDP per capita, 1963
V8 GNP per capita, 1967
V10 GNP factor prices, 1968
V12 Percentage in agriculture, 1958
V18 Energy consumption, 1963
V19 Energy consumption, 1966
V20 Percentage of wage earners, 1963
V26 Trade as % of GNP, 1968
V28 Inhabitants per doctor

TABLE XI

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT*

Indicators	Loading on the First Factor
V1 Money deposits, 1963	(77)
V2 Paper money in circulation, 1963	(78)
V6 GDP per capita, 1958	(85)
V12 Percentage in agriculture, 1958	-(58)
V18 Energy consumption, 1963	(74)
V19 Energy consumption, 1966	(70)
V20 Percentage of wage earners, 1963	(82)
V26 Trade as % of GNP, 1968	(72)
V28 Inhabitants per doctor	-(77)
Percentage of total variance	64.4

* Factor loadings are shown without decimals. Loadings ≥ 50 are shown in parentheses.

Thus this procedure has allowed a selection of nine indicators which, taken together, can be considered as more valid and reliable measures of the level and the rate of economic development than a single indicator such as G.N.P. per capita. Because they have been tested to see if they all relate to the same analytical syndrome, and because by using multiple indicators some of the biases described earlier have been eliminated, these indicators were judged to constitute a valid definition of the level of economic development.

On the basis of this second factor analysis, factor scores were computed for each country and were used as reliable and valid measures of that country's position on the index of the level of economic development. Since in each case the second factor analysis had revealed only one factor it was not necessary to suppress secondary factors through equations which maximize the variance on the desired factor. Table XVII reproduces the factor scores for each country on an index of economic development. These scores can be interpreted in the following manner. Assuming that the level of economic development can be defined by the nine indicators selected through two factor analyses, then the factor score of country X on that composite variable can be interpreted as the level of economic development reached by this country vis-à-vis other countries.

2. The level of social mobilization and military intervention

In discussing the impact of social mobilization on the probability of military intervention, it is necessary, as in the case of economic development, to distinguish between the level and the rate of increase of social mobilization. There is considerable evidence to suggest that a high level of social mobilization and especially a rapid increase in the rate of mobilization contributes to an increase in social conflicts, and ultimately to an increased probability of military intervention. The mechanism at work here has come to be known as the "revolution of rising expectations". As individuals move from a "parochial" to a "subject" and then to a "citizen" political culture, they learn to distinguish the political sub-system from other sub-systems (social, economic and religious) within the society and to recognize their own role within this sub-system (Almond and Verba, 1965). Having identified the political sub-system, citizens are then able to make demands of this system and expect that their political leaders will meet their demands. Because no political system can hope to meet these rising demands, a gap develops which eventually threatens to engulf the entire social system and which increases the probability of political instability and military intervention. The Nigerian novelist Achebe has captured this atmosphere of rising expectations which follow the accession to independence.

> A man who has just come out of the rain and dried his body and put on dry clothes is more reluctant to go out again than another who has been indoors all the time. The trouble with our new nation . . . was that none of us had been indoors long enough to be able to say "the hell with it". We have all been in the rain together until yesterday. Then a handful of us - the smart and the lucky and hardly ever the best - had scrambled for the one shelter our former rulers left, and had taken it over and barricaded themselves in. And from within they sought to persuade the rest through numerous loudspeakers, that the first phase of the struggle had been won, and that the next phase - the extension of our house - was even more important and called for new and original tactics; it required that all argument should cease and the whole people speak with one voice and that any more dissent and argument outside the door of the shelter would subvert and bring down the whole house (1967, pp. 34-35).

For the military, unsatisfied social demands constitute a direct threat to their internal unity and even to their corporate survival. First, the political authorities may be tempted to divert financial resources from the armed forces to satisfy these demands. Alternatively, the political authorities may have to resort to the armed forces to repress violence initiated by angry citizens, in which case the military will inevitably be dragged into the turmoil of domestic conflicts. Without any intimate knowledge of the economic potentialities of their country but because of their isolation from the political process, unmarred by the failures of the new political

leaders, many African officers tended to believe that a change of personnel was all that was necessary to control the citizens' rising expectations and to initiate the process of economic development which would eventually satisfy these expectations. In this sense a high level of social mobilization can be said to increase the probability of military intervention.

As in the case of economic development, an alternate hypothesis has also been suggested. For example, Finer (1962) and Putnam (1967) argue that a high level of social mobilization is historically associated with low levels of political instability and military involvement. They maintain that Western Europe offers convincing examples of such a relationship. They contend that the larger numbers of individuals who have access to political resources in these highly mobilized societies also increases the number of individuals interested in preserving the political status quo. It is also argued, notably by Roberts, (1968), that the new psychological orientation introduced with social mobilization, involving such traits as optimism, secularism and tolerance, makes it unlikely that citizens will ask the military to intervene or that they would accept such intervention.

If the concept of economic development has suffered from over-examination, the concept of social mobilization, first introduced by Karl Deutsch in 1964, is still undefined. The core of

Deutsch's initial definition is that social mobilization, like military mobilization from which it is derived, is a process initiated from outside the individual and often without his collaboration, which reorients this individual to "new social, economic and psychological commitments (Deutsch, 1961, p. 494)." In short, it implies a resocialization of individuals under the impact of new life experiences.[22] From this initial concern with the process of change, social mobilization has frequently become identified with some aspects of its operation. For example, Duff and McCamant (1968) define the concept of social mobilization through some of its consequences. They confuse social mobilization "with the demands that the population places on its political system (p. 1127)." Meanwhile, Putnam (1967) and to some degree Almond and Powell (1966) associate social mobilization with the end result of the process and not with the process itself.

In this study, social mobilization will be defined as the collective and aggregate process of change whereby people, individually or in groups, are brought into new situations which expose them to a resocializing experience and are thereby motivated by a different set of expectations.[23] This contact with and internalization of new experiences can be brought about in a

number of ways and depends for its actualization on the simultaneous presence of numerous factors. Traditionally, the written word (newspapers, textbooks, and magazines) has been the most common instrument for exposing people to new realities. In his massive study of the role of the press in Africa, Ainslie (1966) has shown that the written word has served as a favoured instrument of social communication in a continent where physical communications are especially difficult. Where written materials demand a certain level of literacy to be effective, the newer media (radio, television and films) require no such ability. In Africa, where the overall level of literacy is still very low, it was first thought that the electronic media would soon replace the written word as an agent of social mobilization. But the studies by Bourgoignie (1967), Cazeneuve (1967) and Fougeyrollas (1967) have shown that in the case of radio a certain level of functional literacy must be attained before this medium can play an active role as an agent of social mobilization.

Instruments of physical communication such as roads, automobiles, railways and airlines also contribute to social mobilization by bringing the individual to a film or even to a city, where the individual who has not benefited from education, radio or television can still come into contact with a new reality.

Urbanization also constitutes an important agent of social mobilization. In an urban area, the working, living and playing environment of the individual is often radically different from that in rural areas. The individual who moves to an urban environment is involved in an entirely new set of personal relationships and confronted with a new set of daily experiences. In Africa the process of urbanization has been the object of extensive studies which confirm the resocialization role of the city (Caldwell, 1969; Little, 1965; 1966; Mabogunje, 1962; Verhaegen, 1962). In some cases the consequences of this resocialization process have been negative. For example, Barnard (1967) and Gutkind (1957, 1966) have shown the ways in which urbanization has destroyed the African family. Hougon (1967) and Bouhannam for their part establish a direct link between urbanization and the rise in criminality. Except for Briez (1965) who concludes his study by a statement to the effect that cities are unlikely to contribute positively to the social and economic development of Africa, most authors maintain that in Africa, urbanization has created new patterns of thinking and behaviour. Urbanization, it is suggested, has given rise to new forms of social organizations (Gutkind, 1967; Ledivelec, 1967; Meillassoux, 1968) to a renewal of ethnic consciousness (Dethier, 1961; Hanra and Hanna, 1967; Richards, 1966) to a new role for African women (Vincent, 1966; Leblanc, 1960; Osei-Kofi, 1967) and to a transformation of traditional cultural patterns (Maquet, 1967; Van den Berghe, 1965).

Although its importance may have been exaggerated (Inkeles, 1969b), the education system remains the outstanding instrument of social mobilization. The individual is not only brought into contact with a new reality, but is also given the instruments with which to give a meaning to this reality or even to construct an entirely new reality.

In Africa, education has been judged to be the pivotal element in the development process. Not only does it contribute directly to economic development (Curle, 1963; Etheredge, 1967; Lewis, 1962; Parnes, 1962), but it also favours the development of a new national consciousness (Giters, 1967) and the appearance of a new set of African values (Hama, 1968; King, 1966).

Unlike economic development, which involves changes in a society's collective capabilities, social mobilization involves changes in the mental horizons and aspirations of individuals and groups. Education, urbanization, social communications and transportation constitute the major instruments of this mobilization process.

The procedure followed to operationalize this definition of social mobilization is similar to the one followed in the case of economic development. First, a set of 25 statistical indicators

having sufficient face validity in relation to the four empirical dimensions of social mobilization listed above were selected and submitted to a rotated factor analysis. A second factor analysis was performed with those variables which had strong loadings on the first factor and which were not highly correlated with other variables having similarly high loadings. Table XII summarizes the results of the second factor analysis and the eight indicators listed there serve to construct an index of the level of social mobilization. The factor scores for this index are reported in Table XVII. It should be noted that although the final scale includes at least one indicator for each of the transportation, social communication, education and urbanization dimensions, it does not include any indicator for films, newspapers, televisions, railways, airlines or primary education. This is simply the result of the existence of high correlations between these indicators and one or more of the eight finally selected to constitute the index of social mobilization.

TABLE XII

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF SOCIAL MOBILIZATION*

Indicators	Loading on the First Factor
V30 % of population in cities, 1965	(65)
V31 Radios per capita, 1965	(70)
V32 Telephones per capita, 1968	(72)
V33 Commercial vehicules per capita, 1966	(84)
V34 Automobiles per capita, 1966	(87)
V35 Secondary school enrollment, 1962	(65)
V36 Secondary school enrollment, 1966	(74)
V37 % in post-secondary schools, 1961	(70)
Percentage of total variance	65.7

* Factor loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

3. The level of political participation and military intervention

The impact of a high level of political participation on military intervention is equally difficult to assess. Johnson (1962) and Finer (1962) suggest that a high level of political participation makes it less necessary and thus less attractive for the military to intervene. They argue that in those societies where the citizens have the freedom and the opportunity to participate in the political process, either through elections or political organizations, there will usually be an alternate party capable of administering the country in case of failure of the party in power. Furthermore, in the presence of a high level of political participation, the military will find it difficult to justify their intervention in terms of the citizens' lack of interest in politics. Skurnik (1966), Hippolyte (1968) and O'Connell (1967) have suggested that in Tropical Africa the military has been led to intervene because it constituted the only group deeply concerned with the future of their country. This causal model will attempt to verify the empirical validity of this negative link between a high level of political participation and a high level of military involvement in politics. This link has been seriously questioned by Zolberg (1970) and particularly by Huntington (1968) who believe that increased

political participation, if not accompanied by a similar increase in the level of political institutionalization, opens the way for military coups. Political participation, with its emphasis on an equal distribution of the benefits attained through development, can become a threat to the existing system if it is not absorbed in a political framework which can control and direct these demands for equality.

Like economic development and social mobilization, political participation covers a number of different aspects. National elections which are not simply ratification procedures are one important element. A high rate of involvement in political campaigns and a high turnout of voters also constitute important elements in determining the level of political participation. Similarly, involvement in political and para-political associations, freedom of the press, open political meetings and opportunities for minority groups to express their views must be considered as important elements to determine the level of political participation. Like Weiner (1971), we define political participation as

> any voluntary action, successful or unsuccessful, organized or unorganized, episodic or continuous, employing legitimate or illegitimate methods intended to influence the choice of public policies, the administration of public affairs, or the choice of political leaders at any level of government, local or national (1971, p. 164)."

For most of these aspects there is no statistical data useful for constructing a reliable and valid index of political participation for the states of Tropical Africa. In fact, the only data available on a cross-national basis concern electoral participation in the years immediately before and after independence. After two factor analyses, and after the elimination of those indicators highly inter-correlated, four indicators were retained in Table XIII as defining the level of political participation. The factor scores for each country are reported in Table XVII.

Not only is the percentage of total variance explained by these four indicators considerably weaker (48.3 per cent) than in the case of the other indices, but there can be no doubt that our index of political participation has a very poor face validity. Strictly speaking, it measures participation in national elections and not political participation. But until more statistical information is available, this particular index has to be accepted as a reliable, even if not entirely valid, estimate of the level of political participation.

4. The level of political institutionalization and military intervention

As Chapter I illustrates, there is no ambivalence in the literature on military coups on the positive link existing between the absence of effective political institutions and a high level

TABLE XIII

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF POLITICAL PARTICIPATION*

Indicators		Loading on the First Factor
V38	Percentage of votes cast for ruling party in last election before independence	(53)
V39	Number of national elections	(50)**
V40	Turnout in first election after independence	(67)
V41	Percentage of votes cast for ruling party in first election after independence	(83)
	Percentage of total variance	48.3

* Factor loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

** By eliminating V39 from the set of indicators it would have been possible to obtain a percentage of total variance superior to 50 per cent. However, it was felt that this measure was an important indicator of political participation and was therefore forced into the factor analysis.

of military intervention in politics (Huntington, 1968; Lee, 1968; Zolberg, 1968a). Not only is the low level of political institutionalization considered a major reason for the military decision to intervene, but it is also considered as a precipitant factor which facilitates the implementation of the decision. As political parties lose their prestige and effectiveness, the military supposedly becomes less reluctant to step in and less frightened of the difficulties involved in seizing power. Among the population a decline in the level of party institutionalization reduces their attachment to civilian rule and thus favours a greater tolerance of violent action (Greene, 1970; Fitzgibbon, 1970). Following Huntington's statement (1968), political institutionalization is here defined as the process by which political organizations, notably political parties, acquire value and stability as measured by their adaptability, autonomy and coherence. The importance given in this definition to political parties rests in part on the recognition of their impact on political change in Tropical Africa (La Palombara and Weiner, 1966). However, party institutionalization involves more than political parties. It also includes the national bureaucratic apparatus. To what extent is it free of political considerations and performing its tasks effectively? What percentage of the national budget and of the total manpower of the country does it consume? Political

institutionalization also affects all sorts of groups and organizations. To what extent are they successful in aggregating and expressing public demands to the political authorities? Finally, political institutionalization also covers the division of labour between the various branches of government: the extent of their co-operation and the facility with which they work together.

In trying to operationalize this definition of political institutionalization, problems similar to those encountered in the case of political participation arise. The only statistical data available concern the party systems of various African countries. No data are available on the performance of other political institutions such as civil services, interest groups, executives or courts. Thus, the index of political institutionalization described in Table XIV should more appropriately be referred to as an index of party institutionalization. Its face validity is necessarily very low.

5. <u>The level of government penetration and military intervention</u>

In a country where government penetration is limited, the activities of the central political authorities has little impact on the daily existence of individuals and groups.[24] In these societies, political life remains the domain of a

TABLE XIV

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF PARTY INSTITUTIONALIZATION*

Indicators		Loading on the First Factor
V42	Number of parties with legislative representation	(90)
V43	Number of parties not banned for the 1960-69 period	(89)
V44	Number of splits in parties	(50)
V45	Legislative fractionalization at independence	(79)
	Percentage of total variance	63.7

* Factor loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

few individuals, groups or families. Because they do not threaten to disturb the daily existence of most of the population, military coups are particularly easy to carry out and are therefore a greater temptation. The military, facing a government with few ties to the population is not deterred by fear of a general uprising to oppose its intervention. A political system with a low level of government penetration is also more vulnerable to crises, since it has rarely developed any institutions capable of serving as mediators between the central authorities and those directing events on the periphery. Because they threaten the survival of the political system as a whole and sometimes even the corporate definition of the military, such crises are more likely to persuade the military to intervene. Thus, it is presumed that a low level of government penetration will increase the probability of military intervention in the political process.

Contrary to political participation and party institutionalization, government penetration refers not so much to the internal arrangements of a political system in terms of its structure and institutions but to its overall performance, "the extent to which the political system can affect the rest of the society and the economy (Pye, 1966, p. 46)." Have the actions of the central political authorities any impact on the other sectors of

collective life or on the behaviour of individuals? To the extent that the central political authorities affect the activities of those at the periphery a political system can be said to have penetrated.

The performance of a political system can be judged first of all, by the depth of government penetration and the activities of its political authorities of all levels (international, national, regional and local) and in all of their related levels (administrative, legal and political). A well developed political system should not only be able to accomplish more and influence a wider range of non-political activities, but also to have a deeper and more permanent influence on the lives of the individuals and collectivities which it governs.

A high level of government penetration also signifies an increase in the rationality, effectiveness, coherence and efficiency of the political system (Binder, 1962). A political system should not only extend its penetration vertically and horizontally to reach all sectors, but should also improve the facility and rapidity with which such penetration can be achieved.

On this basis, government penetration can be defined as the extent to which the political system can affect the rest of society and national political institutions affect the life of those citizens living at the periphery. Empirically, government

penetration involves the following three dimensions: (1) the extent to which the central government plays an active role in the socio-economic sectors; (2) the extent to which government decisions are implemented; (3) the quality of the government's political and administrative performance.

In the absence of more statistical data, government spending and government revenues will be taken as indicators of the level of government penetration (Table XV). Without revenue, no government can hope to maintain an effective presence at the periphery and play an active role in various socio-economic sectors. Table XV summarizes the results of the two rotated factor analyses used to construct the index of government penetration.

6. The level of internal conflict and military intervention

For much the same reasons, a high level of social conflict is also said to be conducive to military intervention. An analysis of the circumstances surrounding African military coups seems to support the view that the military have intervened in the political process to prevent further deterioration in domestic peace. In Upper Volta, President Yameogo had to declare martial law after his announcement that further austerity measures would have to be imposed. The trade unions were preparing for a general strike in response to this announcement when Lieutenant-Colonel Lamizana decided to intervene "considering the gravity of the

TABLE XV

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF GOVERNMENT PENETRATION*

Indicators		Loading on the First Factor
V46	Government revenues as per cent of GNP, 1966	(73)
V47	Rate of growth of the ratio of government spendings to GNP, 63/65	(62)
V48	Rate of growth of the central government revenues, 63/66	(72)
V49	Government spendings per capita in U.S. dollars, 1966	(65)
V50	Rate of growth of the ratio of government spendings to GNP, 63/68	(92)
	Percentage of total variance	61.2

* Factor loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

situation and in view of the escalating menaces on social peace (Chronologie Politique Africaine, 3 Jan., 1966)."[25] In the Congo (B), the army intervened after a series of clashes between the police and trade unionists and the announcement by President Youlou that he intended to take over all political powers. In Dahomey, the first military coup of 1963 occurred in an atmosphere charged with tension following multiple political arrests, the detention of labour leaders, a general strike in Cotonou and repeated popular demonstrations. The eventual outbreak of a civil war or a major social disturbance which would necessitate the army's intervention was considered by African military leaders as a potential threat to the army's corporate survival. In Togo in 1966, the possibility of an all-out revolt by the members of the Union Togolaise party following attempts by President Grunitzky to eliminate their spokesman, Vice-President Meatchi, prompted the military to seize power to prevent the emergence, following a civil war, of the Union Togolaise as the dominant political party.

The notion of social conflict is particularly difficult to define theoretically since the need to decide at what level a specific action, such as a strike or a manifestation, ceases to be considered an expression of political participation and becomes a symptom of a social conflict. Morrison et al. define a conflict

in its widest sense as "a condition in which two actors in a social system hold logically incompatible or mutually exclusive values (1971, p. 35)." Others, like Gurr (1968) are more specific and speak of conflict in terms of civil strife, of internal war (Eckstein, 1965) or aggressive behaviour (Feierabend, 1966). Our own definition of social conflict is located somewhere between these two poles. A social conflict will be defined as a situation in which a group of individuals, acting in the name of incompatible or mutually exclusive sets of values, use injury or the threat of injury to persons and property to modify the policies, personnel or activities of the political authorities or those of another group.

This definition emphasizes three major features of a social conflict. First, violence or the threat of violence in the form of injury to persons and to property is the central characteristic of social conflict as it is defined here. Second, social conflict and violence are not exclusively associated with groups acting against established political authorities. Governments can also be the initiator of social conflicts. Finally, social conflicts, as defined here, are not considered dysfunctional from the point of view of the social and political systems. Social conflicts can eventually lead to a complete breakdown in the development process

and even threaten the existence of the political unit. This was almost the fate of the Congo (K) in the early 1960's. On the other hand, social conflict which results from the rational decisions of politicians, can bring a restructuring of institutions, increased government participation and more effective government penetration. In this sense conflict can contribute positively to development as it allows the political system to adapt, if only at the last moment, to a changing environment. Thus, conflict is not only (or always) a sign that the political system is not functioning properly. It can also contribute, although often at great human cost, to the emergence of a more stable, egalitarian and dynamic development process.

At the operational level, the index of the level of social conflict was defined through the use of the seven statistical indicators listed in Table XVI. The factor scores for all countries on this index are reported in Table XVII.

Validity and Reliability of the Indices

Since the factor scores for each of the six dimensions will constitute the raw material of the causal analysis, it is imperative that some of the issues associated with this method of data reduction be discussed before embarking on causal modelling. The first question

TABLE XVI

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF INTERNAL CONFLICT*

Indicators		Loadings on First Factor
V51	Number of demonstrations	(71)
V52	Days of rioting	(70)
V53	Number of declared emergencies	(80)
V54	Years of civil wars	(79)
V55	Arrests per million	(56)
V56	Log killed per million	(76)
V57	Number of recorded instability events	(84)
	Percentage of total variance	65.1

* Factor loadings are shown without decimals. Loadings $\geq$ 50 are shown in parentheses.

TABLE XVII

FACTOR SCORES OF EACH COUNTRY BY THE SIX COMPOSITE INDEPENDENT VARIABLES*

Country	Composite Variables					
	Level of Economic Development	Level of Social Mobilization	Level of Political Participation	Level of Party Insti-tutionalization	Level of Government Penetration	Level of Internal Conflict
Botswana	-0.33	-0.10	-0.75	-0.22	-0.95	-0.25
Burundi	-0.98	-1.09	-0.78	-0.37	0.58	-0.96
Cameroun	-0.01	0.31	0.43	0.52	-0.45	0.86
C.A.R.	-0.24	-0.13	0.93	-0.30	-0.87	0.68
Chad	-1.18	-0.83	0.72	-0.18	0.21	0.77
Congo (B)	1.64	1.75	0.82	-0.25	0.55	0.98
Congo (K)	1.22	-0.34	-1.20	3.50	2.37	1.05
Dahomey	-0.48	-0.26	-0.40	0.35	0.41	-0.57
Ethiopia	-1.16	-0.90	-0.64	-1.32	0.94	-0.37
Gabon	2.27	1.89	1.12	0.01	-0.42	0.84
Gambia	0.17	1.30	-0.45	0.20	-0.76	-0.40
Ghana	0.90	1.04	0.41	1.39	-0.00	-0.30
Guinea	-0.24	-0.06	0.85	-0.96	-0.75	0.50
Ivory Coast	0.77	1.61	0.95	-1.06	-0.42	0.40
Kenya	0.90	0.39	0.18	0.10	0.31	-0.16
Lesotho	-0.17**	-1.04	-1.25	0.41	-0.74	-0.64
Liberia	1.59	1.80	0.80	-1.06	-0.38	-0.08
Malawi	-0.17	-0.78	0.02	-0.63	-0.55	0.46
Mali	-1.07	-0.97	0.96	-1.06	-0.61	-0.69
Mauritania	-0.40	-0.88	0.67	-0.61	-0.38	-0.84
Niger	-1.02	-0.96	1.07	-0.93	-0.78	-0.59
Nigeria	-0.82	-0.61	-1.86	1.40	2.94	0.87
Rwanda	-1.05	-1.09	0.48	0.09	0.15	-0.88

TABLE XVII (Cont.)

Country	Composite Variables					
	Level of Economic Development	Level of Social Mobilization	Level of Political Participation	Level of Party Institutionalization	Level of Government Penetration	Level of Internal Conflict
Senegal	0.98	1.32	0.57	-0.52	-0.60	-0.43
Sierra Leone	-0.10	0.44	-1.51	0.61	-0.23	-0.86
Somali	-0.54	-0.38	-0.33	1.05	-0.44	0.64
Sudan	-0.03	-0.32	-1.57	0.79	2.19	-0.24
Tanzania	-0.22	-0.49	0.21	-0.68	-0.81	0.02
Togo	-0.06	-0.64	0.31	0.05	-0.41	-1.04
Uganda	-0.25	0.12	-1.21	0.29	0.40	0.31
Upper Volta	-1.31	-0.96	0.82	-0.65	-0.32	-1.18
Zambia	1.39	0.86	-0.37	0.04	-0.19	0.76

* Only two decimals are reported.

** Computed from incomplete data.

to be asked concerns alternative methods of aggregating basic indicators which might possibly have been used instead of factor analysis. One such method is T-scoring.

In the T-scoring technique, the distribution of each country's scores on each indicator is transformed so that the new scores are distributed with a mean of zero and a standard deviation of 10.[26] The new score given to each country thus reflects how many standard deviations above or below the mean it was on the average. An index is then constructed by averaging a country's T-scores on each of the indicators previously selected as defining, for example, the economic development syndrome.

The major drawback of this method lies in the averaging of the indicators once they have been T-scored. The problem was appropriately described by Duff and McCamant (1968) in their attempts to aggregate various indicators of system stability:

> it was necessary to determine the importance of each /indicator/ in the combined index and in the final score of system stability. No mathematical solution would help solve this methodological problem. It was necessary to make more or less arbitrary decisions based on our judgement (1968, p. 1130).

In a case where all the factors are highly correlated or where one indicator is clearly more important, the decision is easier. Otherwise, an arbitrary weight, usually of 1 is given to each indicator so that each indicator is equally important in determining the final index.

For example, in his construction of a social mobilization index, Schneider (1971) gives equal importance to radio, television, newspapers, education and urbanization as indicators. However, this is an arbitrary decision not supported by any empirical evidence.

The factor analysis procedure used in this study allows each indicator to be given a specific weight in creating the final index. This weight is equivalent to the importance of this indicator in the identification of Factor I in the factor analysis. For example, Table XII reveals that the indicator for the number of automobiles (V34) has a higher loading (.87) on the social mobilization factor than the urbanization indicator (V30) (.65). Consequently the indicator will weight more heavily in the proportion of .87/.65 in determining social mobilization than the urbanization indicator.[27]

By aggregating indicators in six indices, some of the diversity found in each basic indicator taken individually is lost. No aggregate measure can hope to reflect the complexity of a concept like economic development. This loss was necessitated by the need to develop one set of measures for each of the six independent variables. But it is not an irreversible loss since it is always possible to return to the basic indicators at the analysis level. Nor is this loss entirely unwarranted. Aggregating indicators through their principal common denominator has also contributed to neutralizing some of the sources of error previously described.

At this point several questions may arise: are these various indices constructed through factor analysis genuine indices? To what extent are they empirically distinct? In other words, is the index of the level of economic development empirically distinguishable from the index of social mobilization or the index of the level of internal conflict?

To answer these questions a final rotated factor analysis of the 37 indicators used to build the six indices was run. Table XVIII shows that the results are easily interpreted. All the factors are clearly identified by a distinct pattern of high loadings exactly where such high loadings could be expected. The only exception was Factor I which apparently did not distinguish between the social mobilization and the economic development indicators. This would seem to indicate that these processes as conceptualized and operationalized in this study are not clearly distinguishable from one another. When correlation coefficients between the basic indicators of economic development and social mobilization are examined, the close links between the two variables are even more evident (Table XIX). However, when a rotated factor analysis of the 17 indicators used to construct the indices of economic development and social mobilization is performed (Table XX) two distinct factors emerge: one with a majority of its high loadings on the economic development indicators and the other with a majority of

TABLE XVIII

ROTATED FACTOR MATRIX OF ALL INDICATORS*

Indicators	Factors				
	Level of Socio-Economic Development	Level of Political Participation	Level of Party Insti-tutionalization	Level of Government Penetration	Level of Internal Conflict
Indicators of the Level of Economic Development					
V1 Money deposits, 1963	(54)	-09	18	41	24
V2 Paper money in circulation, 1963	(69)	-03	11	43	-06
V6 GDP per capita, 1958	(82)	42	-06	29	01
V12 % in agriculture, 1958	(55)	-14	-22	-08	-33
V18 Energy consumption, 1963	(50)	04	-06	(72)	-06
V19 Energy consumption, 1966	(82)	-09	-33	00	08
V20 % of wage-earners, 1963	(65)	06	06	47	-27
V26 Trade as % of GNP, 1968	(65)	-19	-01	48	-23
V28 Inhabitants per doctor	-(74)	21	-22	-27	13
Indicators of the Level of Social Mobilization					
V30 % of population in cities, 1965	46	30	01	45	-04
V31 Radios per capita, 1965	(77)	-08	05	-09	-19
V32 Telephones per capita, 1968	(58)	16	-12	-(62)	-08
V33 Commercial vehicules per capita, 1966	(72)	05	-26	25	-26
V34 Automobiles per capita, 1966	(74)	13	-13	(54)	-15
V35 Secondary school enrollment, 1962	(69)	-06	34	02	05
V36 Secondary school enrollment, 1966	(76)	18	20	04	01
V37 % in post-secondary schools, 1061	(85)	12	-14	22	11

TABLE XVIII (Cont.)

Indicators	Factors				
	Level of Socio-Economic Development	Level of Political Participation	Level of Party Institutionalization	Level of Government Penetration	Level of Internal Conflict
Indicators of the Level of Political Participation					
V38 Votes for ruling party before independence	01	-04	-46	09	-(60)
V39 Number of elections	-03	(74)	-08	21	-19
V40 Electoral turnout	24	(52)	-23	-16	-41
V41 Votes for ruling party after independence	08	42	-46	06	-24
Indicators of the Level of Party Institutionalization					
V42 Parties with legislative representation	03	-24	(66)	18	44
V43 Parties not banned	15	-10	(69)	08	42
V44 Number of splits	-18	-37	47	25	-03
V45 Legislative fractionalization	09	-02	(90)	04	30
Indicators of the Level of Government Penetration					
V46 Government revenues to GNP, 1966	34	05	-05	(69)	-13
V47 Growth of government revenues to GNP, 1963/65	06	-19	25	(73)	32
V48 Growth of government revenues, 1963/66	00	06	13	(66)	03
V49 Government spendings, 1966	(75)	44	01	15	-14
V50 Growth of government spendings to GNP, 1963/68	04	08	02	(85)	03

TABLE XVIII (Cont.)

Indicators	Factors				
	Level of Socio-Economic Development	Level of Political Participation	Level of Party Insti-tutionalization	Level of Government Penetration	Level of Internal Conflict
Indicators of Level of Internal Conflict					
V51 Number of demonstrations	01	-03	-02	07	(74)
V52 Days of rioting	-05	05	18	08	(54)
V53 Number of emergencies	14	-06	41	07	(70)
V54 Years of civil wars	-14	-17	07	-06	(83)
V55 Arrests per million	22	05	04	02	43
V56 Deaths per million	09	-10	17	06	(70)
V57 Number of instability events	-16	-13	17	-02	(80)
Percentage of common variance	41.8	5.7	7.2	12.00	28.3
Percentage of total variance	29.9	4.1	5.2	8.6	20.2
Cumulative percentage of variance	29.9	71.5	63.9	58.7	50.1

* Factor loadings are shown without decimals. Loadings ≥ 50 are shown in parentheses.

TABLE XIX

CORRELATION MATRIX OF INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT AND THE LEVEL OF SOCIAL MOBILIZATION

Level of Economic Development	Level of Social Mobilization							
	V30	V31	V32	V33	V34	V35	V36	V37
V1	.48	.51	.28	.51	.35	.42	.39	.35
V2	.42	.61	.54	.71	.59	.55	.49	.36
V6	.64	.55	.71	.67	.80	.55	.67	.71
V12	-.51	-.32	-.40	-.31	-.34	-.33	-.71	-.51
V18	.50	.28	.85	.51	.85	.26	.42	.31
V19	.43	.51	.56	.44	.69	.42	.55	.87
V20	.49	.39	.62	.44	.66	.41	.47	.45
V26	.42	.62	.64	.70	.70	.45	.45	.43
V28	-.46	-.50	-.61	-.59	-.67	-.61	-.64	-.53

V1 Money deposits, 1963
V2 Paper money in circulation, 1963
V6 GDP per capita, 1958
V12 Percentage in agriculture, 1958
V18 Energy consumption, 1963
V19 Energy consumption, 1966
V20 Percentage of wage earners, 1966
V26 Trade as percentage of GNP, 1968
V28 Inhabitants per doctor
V30 Percentage of population in cities, 1965
V31 Radios per capita, 1965
V32 Telephones per capita, 1968
V33 Commercial vehicules per capita, 1966
V34 Automobiles per capita, 1960
V35 Secondary school enrollment, 1962
V36 Secondary school enrollment, 1966
V37 Percentage in post-secondary schools, 1961

TABLE XX

ROTATED FACTOR MATRIX OF SELECTED INDICATORS OF THE LEVEL OF SOCIAL MOBILIZATION AND THE LEVEL OF ECONOMIC DEVELOPMENT*

Indicators	Factor I Level of Economic Development	Factor II Level of Social Mobilization
Indicators of the Level of Economic Development		
V1 Money deposits, 1963	(56)	37
V2 Paper money in circulation, 1963	10	38
V6 GDP per capita, 1958	(70)	(60)
V12 % in agriculture, 1958	-34	49
V18 Energy consumption, 1963	(86)	15
V19 Energy consumption, 1966	33	(75)
V20 % of wage earners, 1963	(65)	40
V26 Trade as % of GNP, 1968	(62	42
V28 Inhabitants per doctor	-(55)	(55)
Indicators of the Level of Social Mobilization		
V30 % of population in cities, 1965	(57)	35
V31 Radios per capita, 1965	24	(71)
V32 Telephones per capita, 1968	(93)	18
V33 Commercial vehicles per capita, 1966	52	(57)
V34 Automobiles per capita, 1966	(84)	40
V35 Secondary school enrollment, 1962	27	(63)
V36 Secondary school enrollment, 1966	40	(68)
V37 % in post secondary school, 1961	15	(90)
Percentage of common variance	85.7	14.3
Percentage of total variance	54.9	8.1
Cumulative percentage of variance	54.9	62.8

* Factor loadings are shown without decimals. Loadings $\geqslant$ 50 are shown in parentheses.

its high loadings on the social mobilization indicators. The difficulty in distinguishing between the two processes comes from the fact that some indicators of social mobilization (particularly urbanization, the number of passenger cars, and the number of television sets) clearly have an economic dimension also.

These six indices may be conceptually distinct but do their empirical measures have any face validity? This question can only be answered by considering both the composition of the indices and the distribution of the national scores within each index (Table XVII). Although the lack of alternate indices makes the task of comparison difficult, it would seem that the face validity of the indices of the level of economic development and social mobilization is relatively high. The so-called poor and undeveloped countries of Tropical Africa (Botswana, Burundi, Chad, Lesotho, Mauritania, Niger, Rwanda and Togo) score relatively low on both indices, while those countries often recognized as approaching the "take-off stage" (Gabon, Ghana, Ivory Coast, Liberia, Senegal and Zambia) have higher scores. However, certain scores, notably those of the Congo (B) and Nigeria apparently do not correspond to reality. The very high scores of the Congo (B) on the index of economic development is due to the fact that this country has very high scores on some of the indicators used to define this index, notably the indicators of G.N.P., electricity production and capital formation. The fact that the Congo (B) scores very high

on the indicator of inflation also suggests that the real level of economic development attained by the Congo (B) might be substantially lower than the one reported here. Nigeria, on the other hand, is obviously handicapped by the large size of its population, which has the effect of bringing down its score on the per capita economic indicators. In our attempt to control for the size of a country by using only per capita indicators, we may have inflated the achievements of small countries such as Gabon and Gambia, and deflated those of the larger countries such as Nigeria, Ethiopia and the Sudan. A similar reasoning probably explains the very low level of political participation registered for Nigeria.

A more serious aberration is the very high score of the Congo (K) on the index of party institutionalization. This is due to the fact that on the four indicators which determine this index, the Congo (K) has the highest score of all African countries. This is easily explained when one considers the definition of these four indicators and the evolution of Congolese politics since 1960. Two of the indicators (V42 and V45) apply to the situation at the time of independence. In the case of the Congo, it is only after independence that the political situation deteriorated to the point of near collapse. Furthermore, since these four indicators emphasize the number of "legal" parties as a sign of party institutionalization, it is not surprising that the Congo (B) has a high score on the

final index since this country had, during the 1960-69 period, a plethora of parties both at the regional and national level. Clearly, in the case of the Congo (B) our index of party institutionalization has a very low level of validity. The face validity of this index might well have been increased if the process of party institutionalization were considered as curvilinear rather than linear.

On the whole, with the exception of the indices of political participation and party institutionalization, it appears that our indices have a sufficient level of face validity to be used in a causal analysis. This analysis should enable us to identify the empirical validity of six hypotheses concerning the level of military intervention existing in the various countries of Tropical Africa.

(H1) A high level of economic development decreases the level of military intervention in politics.

(H2) A high level of social mobilization increases the level of military intervention in politics.

(H3) A high level of political institutionalization decreases the level of military intervention in politics.

(H4) A high level of political participation decreases the level of military intervention in politics.

(H5) A high level of government penetration decreases the level of military intervention in politics.

(H6) A high level of internal social conflict increases the level of military intervention in politics.

NOTES AND REFERENCES TO CHAPTER IV

1. This assumption is contrary to the one adopted by Zolberg (1968a, p. 78) who claims that no variables, "quantitative or qualitative, can differentiate those countries which have experienced a high level of military intervention from the others."

2. On the potential and pitfalls of cross-national research, see Merrit and Rokkan (1966), Alker (1966) and Retzlaff (1965) and Rokkan (1955).

3. Usually a successful coup is given a score of 5, an unsuccessful one a score of 3 and a mutiny a score of 1.

4. Morrisson et al. (1971) have shown that, in Africa, mutinies are associated with communal and ethnic violence rather than elite instability (for example, coups, plots, and attempted coups).

5. On military conspiracies within military regimes, see Congo (B) (1968), Congo (K) (1966), Howe (1967), Lemarchand (1968), Skurnik (1968) and Cornevin (1966).

6. As further evidence that coups, attempted coups and mutinies do not lie on the same conceptual continuum, the data has been submitted to Guttman scaling. The three types of incidents were set in the following order: mutinies, attempted coups, successful coups. Guttman scaling allows one to determine if these three types of incidents do in fact constitute an order as was presumed by Morrisson et al. (1971). The experiment proved to be inconclusive as the coefficient of reproducibility did not reach the criterion level of .90 (.82). It would appear that these types of events are not unidimensional and there is not sufficient reason to believe that the existence of a successful coup accompanies the existence of attempted coups and mutinies. On Guttman scaling, see Guttman (1950) and Nesvold (1969).

7. This definition follows closely the one offered by Gilmore: "The military institution is concerned with the management and use of controlled violence in the service of the state according to terms laid down by the state. When the military institution veers from this role to participate in or to influence other non-military agencies and functions of the state, including its leadership, then militarism exists in greater or lesser degree (Gilmore, 1964, pp.4-5)."

8. Similar scales were suggested by Putnam (1967) and Needler (1963) for Latin America.

9. It could be argued that since military intervention is essentially a post-independence phenomenon, the distribution of annual scores for each country should have been normalized to alleviate the fact that some countries were not independent until the middle of the decade. This procedure was rejected for a number of reasons. First, this causal analysis is concerned with the variations in the level of military intervention across all 32 countries over a decade and not with the longitudinal evolution of the level of intervention in individual countries. Second, we are interested in the actual level of military intervention seen as cumulative and not an averaged process. In other words, it was felt that we should not seek to control for the impact of a country's constitutional status since this status is obviously an important determinant of the level of military intervention existing in that country. Finally, of the 11 countries which were not independent in 1960, eight had scores of zero for all years, and one had a score of one in 1964. Consequently, normalization would have changed very little.

10. See, for example, the critique of Horowitz (1966) on the ideological and sociological definitions of development.

11. A brief survey of the major theories of political development has confirmed that these six factors were repeatedly used to define political development. The concept of political participation is found in Almond, 1963; Black, 1966; Hopkins, 1969; Ishida, 1968; Olsen, 1968; Rachty, 1968; Rustow, 1967; Salcedo, 1968; Scalapino, 1968; Steiner, 1968; Zolberg, 1969. The concept of political institutionalization is used by Black, 1966; Cutright, 1965; Eisenstadt, 1966; Huntington, 1968; Olsen, 1968; Pye, 1966; Ranis, 1969; Snow, 1969; Zolberg, 1969. The concept of government penetration is used by Eisenstadt, 1966; Hopkins, 1969; Rustow, 1967. Hopkins (1969) and Snow (1966) have also made use of the notion of domestic stability to define political development. As for the concepts of economic development and social mobilization, and their impact on political development, see Baran, 1957; Bendix, 1964; Buchanan and Ellis, 1955; Delorme, 1968; Deutsch, 1966; Holt and Turner, 1966; Schweinitz, 1964; Spengler, 1960, 1961.

12. See Hammond (1960); Hoselitz and Weiner (1961); Ridcker (1962); Hoselitz (1960) and Davis (1962).

13. Finer (1962); Feierabend and Feierabend (1966); Gurr (1968, 1970) make similar points. For example, Finer (1962) argues that a high rate of economic development is one factor which, along with military professionalism and civilian supremacy, inhibits the military from intervening.

14. A similar diagnosis is made by Melkin (1967); Mathews (1966); and Zolberg (1968b).

15. See an interview given by the new military leaders of Mali immediately after their coup (Mali, 1968c). On the Mali coup, see Jones (1969), Mali (1968a, 1968b) and Vieyra (1967).

16. There is abundant literature on the Ghanaian coup. For a detailed description of the economic factors associated with the coup see Ankrah (1967), Benot (1966), Feit (1968), Fitch and Oppenheimer (1966), Markovitz (1967), Nkrumah (1968), and Ocran (1968).

17. The literature on economic development is vast. The discussion in Binder (1971) is particularly useful.

18. International Bank for Reconstruction and Development, World Bank Atlas, Washington, I.B.R.D., 1967; United Nations, Demographic Yearbook, New York, United Nations, 1967.

19. Certain indicators ordinarily associated with economic development such as the Gross National Product (G.N.P.) and the Gross Domestic Product (G.D.P.) and the number of wage earners were not included in this list since they are too dependent on the size of the population. The correlations between these various indicators and the 1962 population are as follows:

Gross National Product, 1965	.92
Gross Domestic Product, 1961	.96
Total number of wage earners	.93

20. On factor analysis see Holzinger and Harman (1941), Horst (1965), Lawley and Maxwell (1963), Addock (1954), Fruchter (1954), Rummell (1970), Reuchlin (1964) and Harman (1967). For shorter and more synthetic presentations of factor analysis see Cattell (1965) and Rummell (1968). For applications of factor analysis in the field of national development see Adelman and Morris (1967) and Schilderinck (1969).

21. The procedure for aggregating indicators in this study is taken from Morrisson et al. (1971) who point out that this procedure is similar to the multi-trait, multi-method used in psychometrics, which requires that an index constructed from many indicators be unidimensional.

22. Lerner (1958), Eisenstadt (1966) and Black (1966) have also made use of the concept of social mobilization. On re-socialization, see Bruner (1956), Levine (1963) and Roach (1967).

23. This definition is closely modelled after those which Tanter (1967) and Fisher et al. suggest.

24. On government penetration in Africa as a cause of coups, see Rivkin (1967), Lantier (1967), O'Connell (1967) and Welch (1967).

25. Later comments of deposed President Yameogo seem to confirm the fact that the army stepped in because it was the only force capable of preserving peace: "Contrairement à ce qu'on peut croire, je suis le premier à me réjouir, et mes ministres avec moi, de la manière dont les choses se sont passées (Le Monde, 5 Jan., 1966).

26. The algebraic formula for this transformation is

$$T = \frac{10}{0} X + (50 - \frac{10\bar{x}}{0})$$

On T-scores, see Horst (1966) and Edwards (1954). For three examples of the use of T-scoring in empirical science, see Cutright (1967), Gurr (1968) and Dull and McCamant (1968).

27. Olsen (1968) suggests regression analysis as a method for aggregating variables: first, one selects the indicators to be aggregated: these indicators are then used as predictors to construct a multiple regression equation; the predicted values obtained are then used as the measures for each country on that variable. But this method requires a set of scores arrived at independently to be used as the dependent variable so that a regression equation can be built. No such scores were available for this study.

CHAPTER V

EMPIRICAL RESULTS: CORRELATION AND REGRESSION ANALYSIS

This presentation of empirical findings must be preceded by an explanation of the decisions taken concerning two methodological issues associated with the analysis: the normality of the data distributions and the significance levels of the findings. Although technical and apparently incidental to the main question of the level of military intervention, these decisions are vital for a correct appreciation of the following empirical analysis.

The first decision made concerns the selection of the appropriate statistical techniques with which to carry out the analysis. This decision in turn requires preliminary consideration of the nature of our data. Since the basic and composite variables for this study were constructed to meet the requirements of interval level statistics (Siegel, 1956; Kaplan, 1964), it might be expected that statistical techniques applicable to an interval level of data measurement would be applicable. However, these techniques require that the data be taken from populations with a normal distribution.[1] Yet Table VII, for the dependent variable, and Table XVII, for the independent variables, show that the variables involved here do not have a normal distribution. Furthermore, the presence of a high degree of data

measurement error adds to the possibility of distortion in the use of any interval level statistic such as the Pearson r correlation coefficient.

The usual procedure in such a situation has been to downgrade the interval data to the ordinal level and to use only those statistical techniques appropriate to that level of measurement, notably the Spearman and Kendall rank correlation coefficients. These non-parametric tests do not specify any conditions about the parameters of the population from which the data are drawn.[2]

Although methodological vigilance cautions against the use of parametric statistics, there are three reasons which support their use in this case. First, not to do so would have meant to discard valuable information about the data. Although it was felt that in an exploratory study such as this extreme caution should be applied when interpreting the empirical results, it was decided that methodological risks, when correctly identified, could be accepted so that more challenging hypotheses could be generated. Only if data is fully explored can new avenues of research be opened. Second, since ordinal data can easily be elevated to the level of interval data, it seemed justified not to lower the data from the interval to the ordinal level.[3] Third, in this case interval level statistics provided more methodological flexibility by allowing for fuller consideration of the relationship between the theoretical considerations and the empirical findings. For example, correlation coefficients can be unambiguously interpreted

within a finite and known range; squaring the correlation coefficient gives quantitative knowledge of the amount of variance accounted for by the independent variables; correlation coefficients have been used so widely that the major pitfalls in their interpretation have been extensively mapped;[4] and more important, correlation coefficients and the assumptions which accompany them[5] are prerequisites for the more powerful techniques of regression and dependency analysis.[6]

Having opted for the use of interval correlation coefficients rather than rank-order coefficients, it is next necessary to face the question of the statistical significance of the results.[7] Although a high correlation coefficient between two variables indicates a strong association between them it does not guarantee the statistical significance of this association. Tests have to be performed to ascertain if the association, however strong, is a real one and not the product of chance. In principle this problem exists only when working with samples. When a correlation coefficient between two variables uses all the cases in a given population as a basis for calculation this correlation coefficient can be said, pending measurement error, to describe correctly the strength of the association between the two variables in that population. Only when dealing with a sample of this population can a high correlation coefficient be the result of random fluctuations in the sample selected.[8]

Since this study considers the entire population of the states in Tropical Africa, and not a sub-section or sample, such significance tests are, strictly speaking, not necessary. However, they have been carried out for two reasons. First because the fact that this study deals with an entire population rather than a sample is really an artificial distinction. The 32 countries of Tropical Africa constitute a single population only because the states of Northern and Southern Africa and the rest of the world have been eliminated. In fact, a population of 32 African states is really a sample, and as such the use of significance tests is justified. Second, because of problems of reliability and validity, the data on the population of the states under study are necessarily afflicted by chance fluctuations. The same variables measured by a different observer or at a different time would probably have yielded different coefficients of association. Tests of significance constitute an instrument with which to assess the degree to which an association between two variables would remain reliable if a different set of observations were taken. A test of statistical significance thus becomes an instrument to judge the substantive importance of an observed correlation on the basis of the argument that "an association in an empirical population, produced by natural processes, to which substantive importance is attributed, must be at least greater than that which could reasonably be expected to be produced by chance . . . process (Gold, 1964, p.18)." Therefore, instead of reporting the significance or non-significance of each correlation coefficient, we will report the level at which the correlation coefficient can be considered significant.

Bivariate Analysis

Looking first at the product-moment correlations between the composite variables and the level of military intervention (Table XXI), no striking trend is apparent as to the strength or significance of the correlations. Two coefficients: those involving the level of party institutionalization and the level of internal conflict, are significant at less than the .05 level, indicating that we can be relatively confident in the statistical significance of these correlations. In the case of the correlation between the level of military intervention in politics and the level of political participation the chances of a non-significant correlation rise to 10 per cent. For the three other independent variables, both the correlational and significance levels are very low. This first set of correlations suggests that the levels of party institutionalization and internal conflict are moderately and positively associated with the level of military intervention in politics. The other composite variables, the levels of economic development, social mobilization and government penetration, are only slightly and negatively linked to the level of military involvement.

It may seem surprising to draw such inferences from such low correlations. The basis for these conclusions lies in part in the nature of the correlation coefficient. When the range of the data

TABLE XXI

CORRELATION OF THE COMPOSITE INDEPENDENT VARIABLES AND THE DEPENDENT VARIABLE *

Composite Independent Variables	Pearson R	Standard Deviations	Level of Significance
Level of economic development	-.16	1.0	.30
Level of social mobilization	-.05	0.9	.40
Level of political participation	-.27	8.9	.10
Level of party institutionalization	.38	0.9	.05
Level of government penetration	-.16	1.0	.30
Level of internal conflict	.58	1.0	.01

* The standard deviation of the dependant variable is 12.8.

is narrow, the magnitude and significance of the coefficients is artificially low. The greater the variability of the data, the higher is the correlation, everything else being equal. For this reason, the standard deviations of the different variables have been listed as well as the correlation coefficients and the levels of significance. In the case of the composite variables the variability is at a minimum due partly to the aggregation process through factor analysis but mainly to the lack of variability in the data itself. The very low coefficients between the independent and dependent variables are therefore probably more the result of a lack of variability in the data than of a total absence of association.

The validity of apparently statistically insignificant correlation coefficients is also reinforced when instead of the composite independent variables, we consider the correlations between the individual basic indicators and the dependent variables (Table XXII). Of the nine indicators which define the index of economic development, six have correlation coefficients with the dependent variable which are in the same direction and range as that between the composite measure of economic development and the level of military intervention in politics.

The discordance between the correlations of two indicators of the level of industrialization, that is, the percentage of wage-earners in the active population (V20) and the percentage of this population engaged in subsistence agriculture (V12), is even more revealing.

TABLE XXII

CORRELATION OF BASIC INDICATORS AND THE DEPENDENT VARIABLE

Basic Indicators	Pearson R	Standard Deviations	Level of Significance
Indicators of the Level of Economic Development			
V1 Money deposits, 1963	.09	29.1	.40
V2 Paper money in circulation, 1963	-.31	229.1	.10
V6 GDP per capita, 1958	-.05	48.8	.40
V12 Percentage in agriculture, 1958	-.37	9.1	.05
V18 Energy consumption, 1963	-.23	80.7	.20
V19 Energy consumption, 1966	-.14	62.4	.30
V20 Percentage of wage earners, 1963	.10	4.6	.40
V26 Trade as % of GNP, 1968	-.24	28.9	.20
V28 Inhabitants per doctor	.11	206.0	.40
Indicators of the Level of Social Mobilization			
V30 % of population in cities, 1965	.17	78.4	.30
V31 Radios per capita, 1965	-.19	34.4	.20
V32 Telephones per capita, 1968	-.13	27.8	.40
V33 Commercial vehicules per capita, 1966	-.28	33.8	.10
V34 Automobiles per capita, 1966	-.32	195.5	.10
V35 Secondary school enrollment, 1962	.03	23.9	.40
V36 Secondary school enrollment, 1966	.12	46.8	.40
V37 % in post-secondary schools, 1961	.07	18.0	.40
Indicators of the Level of Political Participation			
V38 Votes for ruling party before independence	-.54	25.6	.01
V39 Number of elections	.16	2.9	.30
V40 Electoral turnout	-.11	18.4	.40
V41 Votes for ruling party after independence	-.30	22.1	.10

TABLE XXII (Cont.)

Basic Indicators	Pearson R	Standard Deviations	Level of Significance
Indicators of the Level of Party Institutionalization			
V42 Parties with legislative representation	.36	2.7	.05
V43 Parties not banned	.41	4.1	.05
V44 Number of splits	.14	1.3	.40
V45 Legislative fractionalization	.33	25.7	.05
Indicators of the Level of Government Penetration			
V46 Government revenues to GNP, 1966	-.02	7.3	.40
V47 Growth of government spendings to GNP, 1963/65	.02	31.4	.40
V48 Growth of government revenues, 1963/66	-.12	19.0	.40
V49 Government spendings, 1966	-.14	45.3	.40
V50 Growth of government spendings to GNP, 1963/68	-.18	12.8	.20
Indicators of the Level of Internal Conflict			
V51 Number of demonstrations	.41	10.0	.05
V52 Days of rioting	.41	2.2	.05
V53 Number of emergencies	.58	1.9	.01
V54 Years of civil wars	.45	1.8	.01
V55 Arrests per million	.28	136.9	.10
V56 Deaths per million	.30	2.8	.10
V57 Number of instability events	.59	3.7	.01

Following the more general trend of a negative association between the level of economic development and the level of military involvement it was expected that the correlation between V20 and the level of military involvement would be negative while the correlation with V12 would be positive. In fact the opposite result emerged. This discordance may have a number of sources. Most important is the possibility that in Africa, economic development does not preclude having a large percentage of the population engaged in subsistence agriculture. Another possibility is the fact that although the level of economic development may inhibit military involvement in politics the level of industrialization may well work to encourage military involvement.[11]

Urbanization and to a lesser extent, education apparently have a similar effect within the social mobilization syndrome.[12] Social and physical communications serve to inhibit military involvement, while the immediate effect of urbanization and education is to favour a high level of military intervention in politics.

The most striking result in the bivariate analysis of the three political variables is the high and positive correlation between party institutionalization and the level of military involvement. Contrary to the expectations of Huntington (1968) a well-developed and stable party system is not incompatible with a high level of military involvement in politics. However, it should once again be noted that the measure of party institutionalization is not entirely

satisfactory and is limited to the number of political parties and the stability of the party system. There are no indicators of the bureaucratic and administrative aspects of the party institutionalization process.

On the other hand, a high level of apolitical participation, which has often been hypothesized as favourable to military participation especially when it is not accompanied by party institutionalization, has been found to be markedly and negatively associated with the dependent variable. The level of government penetration is also negatively associated with military involvement, thus suggesting that administrative links between the government and the population can serve to inhibit or to render difficult or useless the active participation of the armed forces in the political process.

Observers of the African scene have suggested that political and social instability have been found to be highly and positively associated with military participation. The coefficients using the composite variable is .58 while the median coefficient using the seven indicators is .41. This convergent pattern of high correlations may be taken as suggesting an immediate and almost direct association between the level of internal conflict and the level of military intervention in politics.

These results are not the only ones to emerge from this preliminary empirical analysis. Bivariate analysis also suggests a number of secondary findings, some of which will become more important at a later stage. At this time we have simply listed them without attempting to integrate them in a theoretical explanation.

(B1) The level of overall economic development reached by an African country has little impact on the level of military intervention;

(B2) even if the overall impact of economic development is minimal, nevertheless a high level of overall economic development decreases, although only slightly, the probability that military organizations will intervene repeatedly in the political process;

(B3) contrary to the trend indicated by the level of overall economic development, the extent to which an African country is industrialized increases slightly the probability that the military will intervene in that country's political process;

(B4) similarly, a high level of economic welfare has the effect of slightly increasing rather than decreasing the level of military intervention;

(B5)(B6)(B7) the other dimensions of the process of economic development (economic input, economic output and economic autonomy) all contribute to decrease the level of military intervention in politics;

(B8) the level of social mobilization has almost no impact on that country's level of military intervention in politics;

(B9) however, a high level of social mobilization decreases, although only slightly, the probability of political intervention by the military;

(B10) a more urbanized country is more likely to exhibit a slightly higher level of military intervention in politics than a country where the level of urbanization is still low;

(B11) a country with a better educational level is more likely to exhibit a slightly higher level of military intervention than one where the level of education is still low;

(B12) a country with a well-developed grid of social communications is more likely to exhibit a low level of military intervention than a country where social communications are still at a minimum;

(B13) a highly developed network of physical communications is likely to decrease moderately the level of military intervention in politics;

(B14) the level of political participation in electoral activities in a given country has only a slight impact on the level of military involvement in politics in that country;

(B15) even if the impact is minimal, a high level of political participation in electoral activities decreases the probability of political intervention by the military;

(B16)(B17)(B18) while the number of elections held is positively correlated with the level of military interventions, the level of voter turnout and the level of voter support for the dominant party appear to decrease the level of military intervention in politics;

(B19) the extent to which the party system is institutionalized has a moderate impact on that country's level of military intervention;

(B20)(B21)(B22) a high level of party institutionalization (including the level of party representativity and the level of party division) apparently increases the likelihood of political intervention by the military;

(B23) the extent of government penetration has only a limited impact on the level of military involvement in that country's political life;

(B24)(B25)(B26) a high level of government penetration (as measured by its total expenditures or its expenditures in relation to the G.N.P.) inhibits political intervention by the military organization;

(B27) the level of internal conflict is the "best" predictor of the extent to which the military organization will intervene in that country's political process;

(B28)(B29)(B30) a high level of internal conflict (either on a small or massive scale) increases the probability of military intervention in politics.

On the basis of these preliminary findings it is plausible to suggest that in Tropical Africa the level of military interventions is determined almost exclusively by changes in the political environment such as political participation, party institutionalization and internal conflicts, which are more closely associated with the dynamism and the life of the polity than with systemic features such as the level of economic development, social mobilization and government penetration. Thus it

would seem that the level of military intervention existing in a given African country is related to the behaviour (conflictual or not) of the political actors and not to any structural or performance characteristics of the entire social system.

Unfortunately, bivariate analysis can only suggest such an interpretation. It cannot verify empirically the causal relationships between our variables. To do so we must make use of a more powerful statistical tool, step-wise regression analysis. In addition to suggesting causal statements, bivariate analysis was also used for three other reasons. The first was to assess once more the validity of the technique of variable aggregation. The fact that the correlations between the dependent variable and the basic variables were, on the whole, of the same intensity and direction as those with the appropriate composite variables would seem to indicate that this aggregation process has not distorted or simplified reality in any exaggerated fashion.

The second aim was to determine if all the dimensions involved in the multi-dimensional processes of economic development and social mobilization stood in an identical correlational relationship with the dependent variable. In this respect bivariate analysis reveals that the level of industrialization, urbanization and education may have a different impact on the level of military involvement in politics than the overall processes of economic development and social mobilization.

The third aim was to identify which composite and basic variables were most highly associated with the dependent variable and could thus ultimately prove to be the best predictors. For example, assuming for the moment an absence of spuriousness, the level of internal conflict emerged as the variable most immediately associated with military involvement in politics.

Step-wise Regression Analysis

Before looking at the empirical support for these hypotheses several questions can be asked. How well does this set of variables explain the phenomenon under investigation? How much of the dependent variable's variance do the six independent variables explain? What is the strength of the hypothesized causal relations and do these relations remain intact when all the independent variables are taken into account? The specific contribution of each independent variable to the causal explanation must be determined to answer these questions. Step-wise multiple regression analysis provides answers to the first two of the questions while the third can be answered by dependence analysis. But before the technique of regression analysis can be applied a number of important methodological questions have to be discussed.

According to Blalock (1964) although correlation coefficients are helpful "for describing the nature of the relationship between the variables, it is the regression coefficients which give us the laws of science (1954, p. 51)." In fact, regression analysis attempts

to supplement correlational analysis with a causal perspective. As such its objective is to predict the level of a dependent variable Y by using a number of independent variables X_1, X_2, X_3. . . X_n. Using the least squares criterion to obtain the "best" fit an estimating equation is calculated (equation 6.1) which, if the true regression is of the same form, represents the best and most unbiased estimate of the regression equation (equation 6.2). When six independent variables are involved, as in this case, the estimating and true regression equations are as follows:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + e \qquad (6.1)$$

$$\hat{Y} = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + e \qquad (6.2)$$

where a and b constitute unbiased and the most efficient estimates of α and β, and where a is the intercept, b_1, b_2. . . b_6 are the regression coefficients and e the error term.[14] These regression coefficients can be interpreted as the amount of change required in each of the x_1 to x_6 independent variables to produce a change of one unit in the level of military intervention when all the other variables are held constant. The term e should be interpreted as the amount of variation in Y which is not explained by the particular combination of the x_1 to x_6. By squaring the multiple correlation coefficient (R) the percentage of the variance of Y which is explained by the independent variables can be determined.

Naturally, the more numerous the independent variables used as predictors, the higher the probability of arriving at an adequate prediction of Y since there is always a chance that the addition of a new variable will explain more of the variance in Y. Consequently, if the only aim is to maximize the accuracy of the prediction, the highest number of predictor variables would be used. Yet this all-out approach often leaves a large number of predictor variables for which it is difficult to construct an encompassing theoretical justification. Consequently, a second aim of regression analysis is to find a smaller sub-set of variables which will account for a high percentage of the variance, eliminating from the equation those variables which make almost no independent or significant contribution to explaining the variance of Y. This can be done when two variables are highly inter-correlated, so that by deleting one the equation is not deprived of much explanatory power. When two variables are closely related to a third, a control for this third variable reduces the independent contribution of the two initial variables. Finally, when a variable is a linear combination of two or more variables already in the equation it can be eliminated. The step-wise regression procedure can produce the most limited sub-set of predictor variables which are making a significant and independent contribution to the prediction of Y.[15]

In the step-wise procedure, the independent variable having the strongest correlation with the dependent variable is selected as the first variable to enter the equation. A matrix of partial correlations is then computed using the previously selected variable as a pivot. The second variable chosen for the equation is that with the strongest partial correlation with the dependent variable. This procedure

is repeated until additional variables entering the equation no longer make a significant contribution to the prediction of Y. This step-wise procedure thus permits the independent variables to be ranked by their explanatory power. Usually the last variables to be entered in the equation will make the least contribution and can then be eliminated from the final equation. In an exploratory study such as this, this procedure is superior to the non-discriminant multiple regression procedure where all the independent variables are forced into the regression equation.

Only those variables which make an important and distinct contribution should be retained, as well as those variables whose contribution is significant, that is those which can be distinguished from random fluctuations due to measurement or sample errors. The task of measuring the statistical significance of the equations produced with the introduction of an additional variable is performed by delimiting a threshold known as the F-probability, usually .05 or .10. The use of this F criterion for each new variable as it is selected from the partial correlation matrix allows for the elimination of a variable which might have been entered as the best variable at an earlier stage but has now become redundant because of new variables entering the equation. Thus at every stage in the process every variable irrespective of its point of entry into the equation, is assessed as to the significance of its contribution and eliminated if this contribution is seen to be lower than a certain threshold.

For this study it was decided that although the step-wise procedure was the most appropriate technique, some of the specific characteristics of this research made the use of significance levels unwarranted. Since this constitutes a radical departure from current regression practices, some explanations are in order. First, as noted above, the purpose in using regression analysis was to determine: if the model included all relevant variables and how well it succeeded in explaining the phenomenon under investigation. That is, to what extent the independent variables account for the variation in levels of military intervention among the 32 countries under consideration. The primary objective is not to construct the most limited regression equation. The significance of each individual variable as it enters the regression is not as important as the joint capacity of the variables to explain the variation in the level of military intervention. If the independent variables taken together explain only 8 per cent ($R^2 = .08$) of the variation, then it is obvious that an attempt to arrive at a satisfactory model by using specific causal arrangements of these variables would be futile. The maximum explanatory level which this model could reach would be 8 per cent and more likely less if some of the causal relationships were set aside. In the end, the dilemma between the most economical and the most isomorphic representation of military intervention in politics was decided in favour of isomorphism. As pointed out by Blake:

> Deleting variables until only the most significant set remains satisfied the goal of parsimony but raises the problem of "specification error". That is, if important variables are omitted from a model, the effects of the remaining variables

> will be biased. Unless those variables omitted are uncorrelated with the rest. Including unnecessary variables does not bias the results but results in loss of efficiency (i.e. it becomes difficult to find significant coefficients because the standard errors of the variables will increase) (1970, p.26).[16]

To eliminate independent variables solely on the basis of the significance of their contribution will eventually lead the researcher to a theoretical deadlock where some of the more important variables are eliminated from the regression equation leaving an equation which is parsimonious but not open to interpretation.[17] Similarly the "forced" entry into the regression equation of a predictor which does not meet the significance test often permits the entry of other variables and significantly increases its prediction accuracy.[18] This is particularly the case when there is some degree of intercorrelation between the independent variables.[19] Finally, Kane (1968) suggests that the significance of the final equation obtained through step-wise regression may well be a spurious one. By automatically testing so many different combinations of predictors, especially when there are more than three or four independent variables, step-wise regression sharply increases the probability of defining at least one significant equation. The significance of each step in the step-wise procedure may be insured through the use of the F-probability, while the trial and error character of the procedure often nullifies the significance of the overall approach.[20]

Since the objective here is one of isomorphism rather than parsimonious prediction, four series of step-wise regression analyses have been carried out (without any level of significance tests).

The first regression used the six composite variables as predictors (Table XXIII). The second set of regressions used as predictors each sub-set of basic variables. It was felt that this procedure would provide more confidence in the results of the overall regression since it allows for an examination of the predictive behaviour of each basic indicator (Tables XXV to XXX). In turn, the results of these regressions were compared with similar regressions using all the variables associated with each of the six independent variables, not only those selected through factor analysis (Table XXX). This procedure shows once more if the aggregating process with which the composite independent variables has respected the complexity of the initial basic variables. Finally, a regression was performed using the best six predictors among the 34 variables used to build the composite variables (Table XXXI). For each, the F-probability and the standard deviation of the estimate were produced so that the degree of confidence which can be attached to each equation can be determined.[21] The F-probability gives the probability of obtaining these regression results by chance and the standard error allows an estimate of the distribution of the actual observations about the regression line. Consequently, the smaller the standard error, the more precise is the prediction equation. If a standard error of 10.0 results, this would mean that, in the prediction of military participation, errors as large as 10.0 units could be expected, which is quite high considering that the mean of the

dependent variable is 11.56 with a standard deviation of 12.83. In other words, any predicted Y value will be within $\pm$ 10.0 of the real value 68 per cent of the time, and within $\pm$ 20.0 about 95 per cent of the time.[22]

A close study of Table XXXIII reveals a number of interesting findings. For example, it shows that the six independent variables acting together explain close to 40 per cent of the variance in the dependent variable, with a multiple correlation coefficient of .63 and the F-probability at .042. Although not overwhelming, this result is sufficiently satisfactory to allow us to pursue our model building enterprise. It means, among other things, that the set of independent variables selected explains a sizeable portion of the variation in the level of military intervention. Therefore, the sub-set of independent variables has enough explanatory power to justify a more refined analysis.

Although it is still impossible at this stage to evaluate in any definite way the causal importance of each composite independent variable, it is possible to compare the results obtained in the step-wise regression procedure with the preliminary results obtained with the bivariate analysis. Table XXIV facilitates this comparison. On both the bivariate and the regression analysis the level of internal conflict emerges as the best single independent predictor. Furthermore, the direction of the causal impact is in the same direction as the correlation relationship. Propositions B27 and B28 from the bivariate analysis are thus partially confirmed by the regression analysis.

TABLE XXIII

STEP-WISE REGRESSION ANALYSIS USING THE SIX COMPOSITE VARIABLES AS PREDICTORS

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
Level of internal conflict (CONFLI)	+7.77	.57	.33	.001	10.64
Level of government penetration (PENETR)	.44	.59	.35	.002	10.65
Level of political participation (PARTIC)	-2.78	.61	.37	.005	10.75
Level of party institutionalization (INSTIT)	+2.33	.62	.38	.010	10.82
Level of economic development (ECONOC)	-2.28	.62	.38	.020	11.00
Level of social mobilization (MOBILI)	-1.17	.63	.39 **	.042	11.21

* New variable entered at each step.

The regression equation is as follows (6.3)

$$Y = 11.5 - 1.17\ X_1 + .44\ X_2 - 2.78\ X_3 = 2.33\ X_4 - 2.28\ X_5 + 7.77\ X_6 + e$$

where X_1 = the level of economic development
X_2 = the level of social mobilization
X_3 = the level of political participation
X_4 = the level of party institutionalization
X_5 = the level of government penetration
X_6 = the level of internal conflict
Y = the level of military involvement in politics

** It should be noticed that the increase in the multiple R is almost nil. But our point here is not that each composite variable adds significantly to the multiple R but that then r explains a fair "amount" of the variance in the dependant variable.

TABLE XXIV

COMPARISON OF THE CORRELATION AND REGRESSION COEFFICIENTS OF THE COMPOSITE INDEPENDENT VARIABLES AND THE DEPENDENT VARIABLE

Composite Variables Entered	Correlation Coefficient	Regression Coefficient
The level of economic development	-.16	-1.17
The level of social mobilization	-.05	.44
The level of political participation	-.27	-2.78
The level of party institutionalization	.38	+2.33
The level of government penetration	-.16	-2.28
The level of internal conflict	.58	+7.77

Source: Tables XXI and XXIII.

The level of internal conflict (CONFLI) alone explains one third of the variance while a combination of the other five variables adds only 6 per cent to this initial contribution. This fact is not entirely surprising since step-wise regression analysis selects as its first variable to be entered in to the regression equation the variable which has the highest correlation with the dependent variable. But even then it is not uncommon to find that the second or third variable entered in a step-wise regression equation explains more of the variance than the variable entered first even if it shows a lower correlation with the dependent variable. The fact that the standard error of $\hat{Y}$ is smallest when CONFLI is entered alone in the step-wise regression equation coupled with the size of the X_6 coefficient in the regression equation (6.3) on Table XXXIII further confirms the importance of this factor.

If the other composite variables are considered and their regression coefficients compared with the results of the bivariate analysis (Table XXIV), we find that the level of social mobilization is now more closely and positively related to the level of military intervention.[23] These findings would thus tend to deny propositions B8 and B9. However, in this case the divergence between the findings of the bivariate and the regression analysis is so small that the results of the dependence analysis will have to be considered before a more definite conclusion can be presented. Regression analysis also

reveals that the level of military intervention in politics is probably more closely related to the level of government penetration than proposition B23 would indicate. As far as the other composite variables are concerned, regression analysis merely brings limited confirmation to the propositions (B1, B2, B14, B15, B19, B20 and B24) suggested by the bivariate analysis. It should be noted that one of the disadvantages of such unstandardized regression coefficients is that they cannot be compared to indicate the relative importance of each independent variable in predicting the dependent variable.[24] Only when standardized regression coefficients, or beta weights, are available, as in the case of dependence analysis, can effective comparisons be made.

Turning to a set of six step-wise regressions each incorporating a sub-set of the basic variables, some patterns emerge (Tables XXV to XXX). First, it is evident that the variables which were used to define the level of economic development and social mobilization (Tables XXV and XXVI) do a better job at predicting the dependent variable than any of the other sub-sets of basic variables. However, it should be remembered that the equivalent composite variables ECONOC and MOBILI were only slightly correlated with the dependent variable at the -.16 and -.05 level (Table XXIV) and also were not major predictors in the final regression equation (6.3). Thus, while

TABLE XXV

STEP-WISE REGRESSION ANALYSIS USING THE NINE BASIC INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard error of $\hat{Y}$
V12	-.77	37.4	.14	.041	12.12
V1	-.04	61.6	.38	-002	14.48
V20	1.37	66.3	.44	.002	10.13
V19	-.09	72.1	.52	.001	9.55
V18	-.07	76.2	.58	.001	9.13
V6	.06	76.8	.59	.001	9.24
V2	.04	76.8	.59	.003	9.40
V28	-.01	77.5	.60	.006	9.59
V26	.02	77.5	.60	.013	9.81

* New variable is entered at each step.

V1 Money deposits, 1963
V2 Paper money in circulation, 1963
V6 GDP per capita, 1958
V12 Percentage in agriculture, 1958
V18 Energy consumption, 1963
V19 Energy consumption, 1966
V20 Percentage of wage-earners, 1963
V26 Trade as percentage of GNP, 1968
V28 Inhabitants per doctor

TABLE XXVI

STEP-WISE REGRESSION ANALYSIS USING THE EIGHT BASIC INDICATORS OF THE LEVEL OF SOCIAL MOBILIZATION INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
V33	-.04	.32	.10	.078	12.35
V30	.08	.56	.31	.005	11.02
V37	.25	.66	.43	.001	10.19
V34	-.26	.67	.45	.002	10.16
V35	.21	.69	.48	.003	10.11
V31	-.15	.72	.52	.003	9.92
V36	.60	.73	.54	.005	9.85
V32	.12	.74	.55	.008	9.97

* New variable is entered at each step.

V30 Percentage of population in cities, 1965
V31 Radios per capita, 1965
V32 Telephones per capita, 1968
V33 Commercial vehicules per capita, 1966
V34 Automobiles per capita, 1966
V35 Secondary school enrollment, 1962
V36 Secondary school enrollment, 1966
V37 Percentage in post-secondary schools, 1961

the composite variables for the level of economic development and social mobilization do not emerge as good predictors of military intervention, their respective sub-sets of basic variables explain more than 70 per cent of the variance in the dependent variable, even with a decreasing standard error coefficient. This apparent contradiction between the explanatory power of the composite and basic variables can be explained through the combined effect of two factors. The aggregating process, at least in the case of ECONOC and MOBILI, has caused the elimination of the individual specificity of each of the basic variables used to define the ECONOC and MOBILI index. When allowed to combine in two regression equations, these basic variables explain more of the variance in the dependent variable than when they are aggregated in the two composite variables. In other words, the various dimensions of these two composite variables, that is capital investment, industrialization, urbanization, communication and so on, when allowed to enter the regression equations individually, explain more of the variance in the dependent variable than when aggregated together as ECONOC and MOBILI.

This discrepancy can also be explained at an analytical level in addition to this methodological explanation. Located at the head of the causal tree, ECONOC and MOBILI apparently lose some of their explanatory power because they are inscribed in a causal network which includes other composite variables more immediately related to military involvement. As a result, the loss of explanatory power when jumping from the set of nine basic indicators of the level of economic

development to the single ECONOC composite index is not so much a consequence of the aggregating process as that of the interrelations between the different independent composite variables. In addition, the loss of explanatory power through the aggregating process is not altogether a pathological symptom. The components of each basic variable lost through factor analysis are those which were not necessarily associated with the core concepts of economic development and social mobilization but with other social phenomena which might be more immediately connected with the dependent variable. However, the objective of this study is not to construct the best prediction equation using all those indicators which are associated with the level of economic development and the level of social mobilization but to try to arrive at a precise estimate of the causal influence of these two core concepts. For these reasons we are not overwhelmingly alarmed by the fact that our composite independent variables have less predictive power than the set of basic indicators used to construct them.

A reverse phenomenon is to be noted in the case of the basic indicators of the level of internal conflict (Table XXX). On the strength of the correlation and the unstandardized regression coefficient between CONFLI and military intervention (.58 and 7.44) and also considering the high correlations between the seven basic variables of internal conflict and the dependent variable (Table XXII), it would seem likely that the seven basic variables, when left free to combine in the best predictive pattern, would explain more of the variance than their aggregated index (CONFLI). Instead, there is a marked loss

of explanatory power when going from the composite index to the individual basic variables. Here again the aggregation process is partially responsible, but more important this second discrepancy suggests that CONFLI acts not only as a direct cause of the level of military intervention but also as a funnel through which the indirect causal effect of the other independent variables is channelled. Dependence analysis allows for an examination in more detail of this process of direct and indirect causation.

In the conclusion of the section on bivariate analysis, it was suggested, on the basis of a .38 correlation coefficient, that the level of party institutionalization might have a moderate impact on the level of military intervention (B19). The step-wise regression procedure provides only little additional support for this hypothesis with a multiple R^2 of .18. Furthermore, it should be noted that the first variable entered (V43) explains 17 per cent of the variance in the dependent variable, while the three other variables add only 1 per cent to this percentage. Clearly the indicators selected to define INSTIT reveal only a limited portion of the process of party institutionalization. The same criticism applies to those indicators used to define the level of political participation where the first variable entered in the regression equation (V38) monopolizes almost all the explained variance in the dependent variable. On the other hand, while PARTIC explained only 7 per cent of the variability in the level of military intervention,

TABLE XXVII

STEP-WISE REGRESSION ANALYSIS USING THE FOUR BASIC INDICATORS OF THE LEVEL OF POLITICAL PARTICIPATION INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
V38	-.25	.54	.29	.002	10.97
V39	1.18	.58	.34	.003	10.78
V41	-.08	.59	.35	.007	10.99
V40	-.04	.59	.35	.007	11.13

* A new variable is entered at each step.

V38 Percentage of votes cast for ruling party in last election before independence

V39 Number of national elections

V40 Turnout in first election after independence

V41 Percentage of votes cast for ruling party in first election after independence

TABLE XXVIII

STEP-WISE REGRESSION ANALYSIS USING THE FOUR BASIC INDICATORS OF THE LEVEL OF PARTY INSTITUTIONALIZATION INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
V43	.97	.41	.17	.019	11.90
V42	.56	.41	.17	.063	12.07
V44	-.61	.42	.18	.139	12.27
V45	.02	.42	.18	.247	12.48

* A new variable is entered at each step.

V42 Number of parties with legislative representation at independence

V43 Number of parties not banned for the entire 1960-69 period

V44 Number of splits in parties

V45 Legislative fractionalization at independence

TABLE XXIX

STEP-WISE REGRESSION ANALYSIS USING THE FIVE BASIC INDICATORS OF THE LEVEL OF GOVERNMENT PENETRATION INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
V50	-.11	.17	.03	.324	12.83
V47	.10	.26	.07	.347	12.79
V46	.33	.28	.08	.479	12.93
V49	-.06	.32	.10	.595	13.08
V48	-.03	.32	.10	.735	13.32

* A new variable is entered at each step.

V46 Government revenues as percentage of GNP, 1966

V47 Rate of growth of the ratio of government spendings to GNP, 1963/65

V48 Rate of growth of the central government revenues, 1963/66

V49 Government spendings per capita in U.S. dollars, 1966

V50 Rate of growth of the ratio of government spendings to GNP, 1963/68

TABLE XXX

STEP-WISE REGRESSION ANALYSIS USING THE SEVEN BASIC INDICATORS OF THE LEVEL OF INTERNAL CONFLICT INDEX

Variables Entered *	b	Multiple R	R^2	F-probability	Standard Error of $\hat{Y}$
V57	1.53	.59	.35	.000	10.49
V53	3.35	.65	.42	.001	10.14
V56	-1.22	.67	.45	.001	10.00
V51	.21	.68	.46	.002	10.11
V54	-1.27	.69	.47	.004	12.25
V55	-.01	.69	.47	.009	10.40
V52	.66	.69	.47	.018	10.59

* A new variable is entered at each step.

V51 Number of demonstrations
V52 Days of rioting
V53 Number of declared emergencies
V54 Years of civil wars
V55 Arrests per million
V56 Log killed per million
V57 Number of recorded instability events

the multiple regression of the four basic indicators used to construct PARTIC explain 35 per cent of this variability (Table XXVII). This high percentage of variance explained would thus tend to deny proposition B14. Finally, Table XXIX confirms the fact that the lack of explanatory power of PENETR (B23) was not the result of the aggregating procedure used to construct PENETR. When allowed to interact freely, the five basic indicators of the level of government penetration explain only 10 per cent of the variability in the level of military intervention in politics. Similarly Table XXX confirms the importance (B27) of the indicators of the level of internal conflict in explaining the dependent variable. In this case the multiple R^2 reaches 47 per cent (with 35 per cent to the first variable entered). As for the direction of the causal effect of each of the six independent variables, an examination of the regression coefficients in Table XXIV will confirm their correspondence with those of the correlation coefficients (B2, B15, B20, B24 and B28) except in the case of MOBILI where, contrary to the proposition suggested in B9, an increase in the level of social mobilization is followed by an increase in the level of military intervention in politics.

Looking at the internal composition of each step-wise equation and comparing the regression coefficients with the correlation coefficients of the bivariate analysis (Table XXXI), partial confirmation can be found for some of the bivariate patterns suggested previously.

TABLE XXXI

COMPARISON OF THE CORRELATION AND REGRESSION COEFFICIENTS OF THE BASIC INDICATORS

Basic Indicators	Correlation Coefficient	Regression Coefficient
Basic Indicators of the Level of Economic Development		
V1 Money deposits, 1963	.09	1.37
V2 Paper money in circulation, 1963	-.31	-.77
V6 GDP per capita, 1958	-.05	-.07
V12 Percentage in agriculture, 1958	-.37	-.09
V18 Energy consumption, 1963	-.23	.02
V19 Energy consumption, 1966	-.14	-.01
V20 Percentage of wage earners, 1963	.10	.04
V26 Trade as % of GNP, 1968	-.24	.04
V28 Inhabitants per doctor	.11	.06
Basic Indicators of the Level of Social Mobilization		
V30 % of population in cities, 1965	.17	.08
V31 Radios per capita, 1965	-.19	-.15
V32 Telephones per capita, 1968	-.13	.12
V33 Commercial vehicules, 1966	-.28	-.26
V34 Automobiles per capita, 1966	-.32	-.04
V35 Secondary school enrollment, 1962	.03	.21
V36 Secondary school enrollment, 1966	.12	.06
V37 % in post-secondary schools, 1961	.07	.25
Basic Indicators of the Level of Political Participation		
V38 Votes for ruling party before independence	-.54	-.25
V39 Number of elections	.16	1.18
V40 Electoral turnout	-.11	-.04
V41 Votes for ruling party after independence	-.30	-.08
Basic Indicators of the Level of Party Institutionalization		
V42 Parties with legislative representation	.36	.56
V43 Parties not banned	.41	.97
V44 Number of splits	.14	-.61
V45 Legislative fractionalization	.33	.02

TABLE XXXI (Cont.)

Basic Indicators	Correlation Coefficient	Regression Coefficient
Basic Indicators of the Level of Government Penetration		
V46 Government revenues to GNP, 1966	-.02	.33
V47 Growth of government spendings to GNP, 1963/65	.02	.10
V48 Growth of government revenues, 1963/66	-.12	-.03
V49 Government spendings, 1966	-.14	-.06
V50 Growth of government spendings to GNP, 1963-68	-.18	-.11
Basic Indicators of the Level of Internal Conflict		
V51 Number of demonstrations	.41	.66
V52 Days of rioting	.41	.21
V53 Number of emergencies	.58	3.35
V54 Years of civil wars	.45	-1.27
V55 Arrests per million	.28	-.01
V56 Deaths per million	.30	-1.22
V57 Number of instability events	.59	1.53

Source: Tables XXII, XXV, XXVI, XXVII, XXVIII, XXIX and XXX.

For example, the unstandardized regression coefficients of V12 (percentage in agriculture) and V20 (percentage of wage earners) confirms what is suggested by the bivariate analysis: that there is a positive causal link between the level of industrialization and the level of military intervention in politics (B3), while the other indicators of the level of economic development show a negative association with the dependent variable (B2). Similarly, among the social mobilization indicators, urbanization and a high level of education seem to increase the level of military intervention (B10, B11) while a well-developed network of social and physical communications inhibit it (B9).

Turning to the indicators of the level of political participation, Table XXXI suggests additional hypotheses which did not emerge clearly from the bivariate analysis. For example, there is apparently a positive link between the number of elections held after independence and the level of military involvement in the political process, while on the other hand the level of voter turnout and voter support of the dominant party has a negative impact on the dependent variable. In the case of the indicators of the level of party institutionalization, Table XXXI reveals that a high number of party splits inhibits military involvement, a fact which did not emerge from the correlation analysis. As for the indicators of the level of government penetration, Table XXXI throws additional doubt on the existence of a negative link between both the per capita level and the growth rate of government revenue and spending and the level of military intervention. On the basis of the

regression analysis it would seem that the relationships between the three intermediate political variables, political participation, party institutionalization and government penetration, and the level of military intervention is not as straightforward as propositions B15, B20 and B24 would indicate.

Finally, the regression of the basic indicators of internal conflict on military involvement in politics shows a discrepancy which at this time will remain unexplained. While other indicators of internal violence are positively related to military involvement, the number of deaths (V56) and the number of years of civil war (V54) are both negatively related to the level of military involvement in politics.[25] Can this suggest that if small-scale outbreaks of instability encourage the military to intervene in the political process, incidents of mass violence which result in deaths and civil wars have a contrary effect?

The last question to be asked before providing these partial findings with a causal interpretation, is whether or not a different selection of predictor variables, also taken from the data bank but not used in the aggregating process of factor analysis, would have given a different set of "best" predictors and would have thus increased the accuracy of the prediction as measured by R^2. To test this possibility, six additional step-wise regression analyses were conducted, using in each case all the predictors available in the

data bank, not just those received by factor analysis (Table XXXII). Thus if 13 indicators of the level of economic development are used rather than nine, a multiple R of 85.2 and a R^2 of 72.6 would result. Although the percentage of the variance explained is significantly increased, especially in the case of the levels of economic development and social mobilization, the overall prediction levels achieved with the use of more variables is not spectacular but remains in the same range as the prediction levels reached with using only those predictors selected through factor analysis. Thus, it would seem that the aggregating process has not resulted in the selection of those variables with a remarkably low capacity of predicting changes in the dependent variables. A final check on the explanatory power of the composite independent variables was performed with the selection of the best individual predictor from each set of basic variables. This step-wise regression, as shown in Table XXXIII, using the most promising individual predictors increases the percentage of the variance explained from 39 per cent in the case of the composite variables to 48 per cent in this case. Therefore, the aggregating process apparently does not diminish drastically the explanatory power of the variables.

While this first step in the analysis of the correlates of the level of military intervention in the states of Tropical Africa has answered some preliminary questions, it has also raised other fundamental questions of a causal nature. First and most important,

TABLE XXXII

STEP-WISE REGRESSION ANALYSES USING ALL INDICATORS OF EACH INDEPENDENT VARIABLE

Variables Entering in the Regression Equations	Multiple R	R^2
Level of economic development (13 predictors)	85.2	72.5
Level of social mobilization (12 predictors)	89.1	79.3
Level of political participation (5 predictors)	65.4	42.8
Level of political institutionalization (12 predictors)	85.8	73.5
Level of government penetration (11 predictors)	67.8	46.0
Level of political conflict (7 predictors)	82.7	68.3

TABLE XXXIII

STEP-WISE REGRESSION ANALYSIS USING THE SIX BEST BASIC PREDICTORS *

Variables Entered**	Multiple R	R^2	F-probability
V57	59.1	.35	.001
V12	63.2	.40	.001
V33	67.1	.45	.001
V50	68.6	.47	.002
V38	69.3	.48	.003
V43	69.3	.48	.007

* Only the best predictor for each set of basic indicators was used.

** A new variable was entered at each step.

V12 Percentage in agriculture, 1958

V33 Commercial vehicules per capita, 1966

V38 Percentage of votes cast for ruling party in last election before independence

V43 Number of parties not banned for the entire 1960-69 period

V57 Number of recorded instability events

it has provided a necessary empirical justification to the final objective of causal modelling. Regression analysis has indicated that the combined causal effects of the six composite variables accounts for nearly 40 per cent of the variance in the levels of military involvement in the political process. There is thus some empirical evidence for the basic assertion of this study. Knowledge of the economic, social and political environments of the African military organizations contributes to an understanding of their involvement in the political process. Second, by using a different sub-set of predictors it has been shown that the aggregating technique used to construct the six composite variables did not necessitate leaving out variables which could have improved drastically the accuracy of the prediction.[26]

Finally the numerous regression analyses have confirmed the validity of the aggregating procedure in all but two of the composite independent variables (political participation and party institutionalization). The fact that the correlation and regression coefficients between the basic indicators and the dependent variable were generally similar in magnitude and direction can be taken as additional confirmation of the validity of the aggregating procedure.

Turning to the empirical findings, we discover that bivariate and regression analysis has allowed the empirical testing of the six hypotheses offered in Chapter V. We had hypothesized that a high

level of economic development (H1) and social mobilization (H2) would tend to decrease and increase respectively the level of military intervention in politics. Bivariate and regression analysis confirmed the negative impact of the level of economic development. On the other hand, the impact of social mobilization has been found more difficult to assess because of a discrepancy between the results of the bivariate and the regression analysis.

The three political variables, political participation (H3), party institutionalization (H4) and government penetration (H5) were hypothesized to be negatively related to the level of military intervention. Preliminary analysis confirmed the fact that a high level of political participation and government penetration will tend to decrease the level of military intervention while a high level of party institutionalization was found to be positively associated with the dependent variable.

Finally, both the bivariate and regression analyses confirmed the positive relationship existing between the level of internal conflict and the level of military involvement in politics (H6). In addition, this preliminary analysis has revealed that some of the components of the independent variables stood in a different causal relationship to the dependent variable than the composite variable.

TABLE XXXIV

SUMMARY OF THE MAJOR FINDINGS OF THE BIVARIATE AND REGRESSION ANALYSIS

Findings	Results of the Bivariate Analysis		Results of the Regression Analysis	
	Strength of the Association*	Direction of the Association	Strength of the Association**	Direction of the Association
Overall level of economic development (ECONOC)	low (B1)	negative (B2)	low	negative
Level of industrialization (V12, V20)	low (B3)	positive (B3)	low	positive
Level of economic welfare (V28)	low (B4)	positive (B4)	low	positive
Level of economic output (V6, V18, V19)	low (B5)	negative (B5)	low	negative
Level of economic input (V1, V2)	low (B6)	negative (B6)	(moderate)***	(ambivalent)
Level of economic autonomy (V26)	low (B7)	negative (B7)	low	(positive)
Overall level of social mobilization (MOBILI)	low (B8)	negative (B9)	low	(positive)
Level of urbanization (V30)	low (B10)	positive (B10)	low	positive
Level of education (V35, V36, V37)	low (B11)	positive (B11)	low	positive
Level of social communication (V31, V32)	low (B12)	negative (B12)	low	(ambivalent)
Level of physical communication (V33, V34)	moderate (B13)	negative (B13)	low	negative

TABLE XXXIV (Cont.)

Findings	Results of the Bivariate Analysis		Results of the Regression Analysis	
	Strength of the Association*	Direction of the Association	Strength of the Association**	Direction of the Association
Overall level of political participation (PARTIC)	low (B14)	negative (B15)	(moderate)	negative
Number of elections (V39)	low (B16)	positive (B16)	(moderate)	positive
Level of voter turnout (V40)	low (B17)	negative (B17)	low	negative
Level of voter support for dominant party (V38, V41)	moderate (B18)	negative (B18)	(low)	negative
Overall level of party institutionalization (INSTIT)	moderate (B19)	positive (B20)	moderate	positive
Level of party representation (V42,V43,V45)	moderate (B21)	positive (B21)	(low)	positive
Level of party splits (V44)	low (B22)	positive (B22)	low	(negative)
Overall level of government penetration (PENETR)	low (B23)	negative (B24)	(moderate)	negative
Growth of expenditures and revenues to GNP (V47, V50)	low (B25)	ambivalent (B25)	low	ambivalent
Level of expenditures and revenues per capita (V46, V48, V49)	low (B26)	negative (B26)	low	(ambivalent)

TABLE XXXIV (Cont.)

Findings	Results of the Bivariate Analysis		Results of the Regression Analysis	
	Strength of the Association*	Direction of the Association	Strength of the Association**	Direction of the Association
Overall level of internal conflict (CONFLI)	high (B27)	positive (B28)	high	positive
Small scale incidents (V51, V52, V53, V55, V57)	moderate (B29)	positive (B24)	moderate	positive
Incidents of mass violence (V54, V56)	high (B30)	positive (B30)	high	(negative)

* The strength of the correlation coefficients was assessed in the following way

$|0 \leq r < .30|$ = low association
$|.30 \leq r < .50|$ = moderate association
$|.50 \leq r|$ = high association

** The strength of the regression coefficients was assessed in the following way

$|0 \leq b < 1.5|$ = low
$|1.5 \leq b < 3.0|$ = moderate
$|3.0 \leq b|$ = high

Strictly speaking we cannot compare the strength of un-standardized regression coefficients. Nevertheless, it was felt that in the case where an increase of one unit in the independent variable produced an increase of three units or more in the dependent variable, it was appropriate to consider the independent variable as having a strong impact.

*** Parentheses were used to denote a discrepancy between the results of the bivariate and the regression analysis.

The results of this more detailed analysis are reported in Table XXXIV. The most interesting ones concern the impact of industrialization, urbanization, education, elections, party splits and mass violence. These six variables were found to have a different impact on the level of military intervention in politics than that of the composite variable.

Dependence analysis, because it takes into account the causal interactions between the independent variables, allows for an estimate of the extent to which these causal links are genuine and not simply statistical artifacts. For example, it might be that the high negative correlation between the level of political participation and the level of military intervention in politics is simply a by-product of a strong indirect and negative influence of social mobilization on military involvement through political participation. The next chapter will attempt to answer these questions.

NOTES AND REFERENCES TO CHAPTER V

1. There is still considerable debate as to whether or not parametric statistics require, in addition to the normality of the data distributions, an interval level of measurement. Stevens (1946) has argued positively, while Gaito (1960) and Anderson (1961) have argued for the negative. On the "limited" war between parametric and non-parametric practioners, see also Page and Marcotte (1966), Savage (1957) and the Introduction to Heerman and Braskamp (1970, pp. 35-38).

2. Naturally, the usual assumptions of the independence of the observations and the underlying continuity of the variables under study must still be met even with non-parametric statistics. As shown by Sawrey (1958), non-parametric statistics may be "distribution free" but they are not "assumption free". The data in this study meets these two assumptions.

3. See Abelson and Key (1959, 1963), Siegel (1956b), Shepard (1966), Stevens (1968) and Labovitz for a discussion of the problems of assuming an interval scale. All these authors agree in recommending consideration of ordinal data as interval data.

4. On the interpretation of correlation coefficients see Baggaley (1964) and Garson (1971).

5. On the role of assumptions in correlational analysis and the consequences of their violations see Binder (1959), Carroll (1961), Norris and Hjelm (1961).

6. On the other hand, Boyle (1966, 1970) has shown that with the help of dummy variables, path analysis could be performed on ordinal data. On dummy variables and their use in regression equations, see Coleman (1964) and Suits (1957).

7. In fact, both the Spearman and the Kendall rank correlation coefficients were calculated as well as their respective tests of significance. Although systematically lower the two rank coefficients simply follow in intensity and direction the patterns set by the Pearson coefficients, described in Table XXI. For this reason they are omitted from the rest of this study.

8. For a detailed presentation of the arguments supporting the use of significance tests in the case of populations see Gold (1964) and Gurr (1967).

9. Guilford (1954, 1956) discusses the characteristic of the Pearson coefficient and suggests corrections to remedy the artificiality of correlation coefficients in cases of low data variability. Because of their complexity such corrections were not used in this study. It can also be argued that in some cases, e.g. if many entries of one variable are zero, the lack of variability in the variables can raise the correlation coefficient. But this is not the case in this study since all the entries for an independent variable are different from zero.

10. In this particular case the difference in data variability could be the major reason for this discordance.

11. The deceptively low correlation between GNP/capita and military intervention gives some support to the earlier decision not to rely exclusively on this indicator as a measure of economic development.

12. There is no statistical evidence to link organization and industrialization. The correlations between V30 and V12 and V18 are .06 and -.11 respectively. The two processes are evidently distinct although their effect on the dependent variable are similar.

13. Most writers agree to the superiority of regression over correlation coefficients. For example, Blalock (1964) states that although correlation coefficients are helpful to the observer for "describing the nature of the relationship between the variables, it is the regression coefficients which give us the laws of science". See also Tukey (1954) and Tufte (1969) for the expression of similar views.

14. The general linear model underlying regression and dependence analysis has been well explained by Fennesey (1968). On the regression model see Johnston (1963), Draper and Smith (1966), Ezekiel and Fox (1959), Christ (1966 and Williams (1959).

15. Other procedures such as a consideration of all possible regression equations, the backward forward and stage-wise regression procedures are also available. Recently, Creager and Valentine (1962) offered a regression technique to study the effect of component variables on a composite variable while Scott (1966) suggests an intermediate technique between factor and regression analysis for those situations where data is necessary before a prediction equation can be built.

16. This distinction closely follows the one introduced by Blalock (1964) between the use of regression equations "(1) as estimating equations, and (2) as causal models (p.43)."

17. The problem of model specification is examined at length by Fisher (1966) and Gordon (1969) who point out that no matter how significant it may be in a given regression, the variable "cows" is a necessary one in any regression analysis of dairy production.

18. For example, in a step-wise regression of party institutionalization variables, the forced entry of a second variable into the equation allowed a third variable to enter and raise the percentage of variance explained from .129 to .57, an increase of .52 in the multiple correlation coefficient. A similar phenomenon is reported by Gurr (1967).

19. Draper and Smith (1966) further suggest that when there is some intercorrelation between the independent variables, it is often necessary to abandon significance tests in order to proceed.

20. Some of the more complex problems associated with regression analysis are discussed in Goldenberg (1968), Theil (1957) and Goldenberg and Jochems (1961). Their approaches will be reviewed in a later section dealing with the assumptions underlying causal modelling.

21. Since this study does not make use of time-series, autocorrelation coefficients and the Durbin-Watson D are not included.

22. The standard error of the intercept and of the b coefficients is not discussed here.

23. See Darlington (1968) on the problems involved in comparing regression coefficients.

24. Nevertheless, unstandardized regression coefficients remain superior to correlation coefficients as measures of association since they are unaffected by the range of the data.

25. The variable V55 (number of arrests) also has a negative coefficient but one which is almost nil -.01.

26. This does not mean that no important variables were left out of the analysis, but more simply that from the original set of variables available in the data bank, no important variables were apparently eliminated through the factoring process. This distinction will become important in the next chapter.

CHAPTER VI

EMPIRICAL RESULTS: DEPENDENCE ANALYSIS

Causal thinking is not new to the social sciences. What is new is a recognition by social scientists that they had always been thinking in causal terms without knowing it. Also new is the discovery by social scientists, following the trend among biological and physical scientists, that causal thinking can be best expressed in statistical language.[1] Two sociologists, Blalock (1964) and Duncan (1966), were among the first to recognize the potential of causal linear modelling for the social sciences. Political scientists have only recently begun to make use of this type of analysis.[3]

The Dependence Approach to Causal Modelling

Common to the different varieties of causal modelling is the following conceptual core.[4] Given a set of variables which are additive, causal, linear and measured on an interval scale, it may be possible to divide this set into three distinct subsets.[5] The variables whose total variation is assumed to be dependent on variables not included in the set of variables under consideration will be referred to as exogeneous variables. The remaining variables are assumed to be completely determined by the other variables in the set. These are described as the endogeneous variables. Note that an endogeneous variable can be dependent both on an exogeneous variable and on other

endogeneous variables. Since the variation in an endogeneous variable is rarely entirely explained by a combination of the other variables in the system, residual variables are thus introduced into the system. These are assumed to be uncorrelated with those variables, endogeneous or exogeneous, which immediately explain the variation in the variable under consideration. Figure 4 is an illustration of these distinctions as applied to this study. Since all relationships are postulated as linear and additive, a series of equations can be derived to formalize the predictive capacity of each variable by those other variables preceding it in the causal tree.[6] However, to obtain these equations the variables must first be put in some causal order. The order selected in this study is based on the following decisions:

(1) The level of economic development and the level of social mobilization are located at the head of the causal tree.

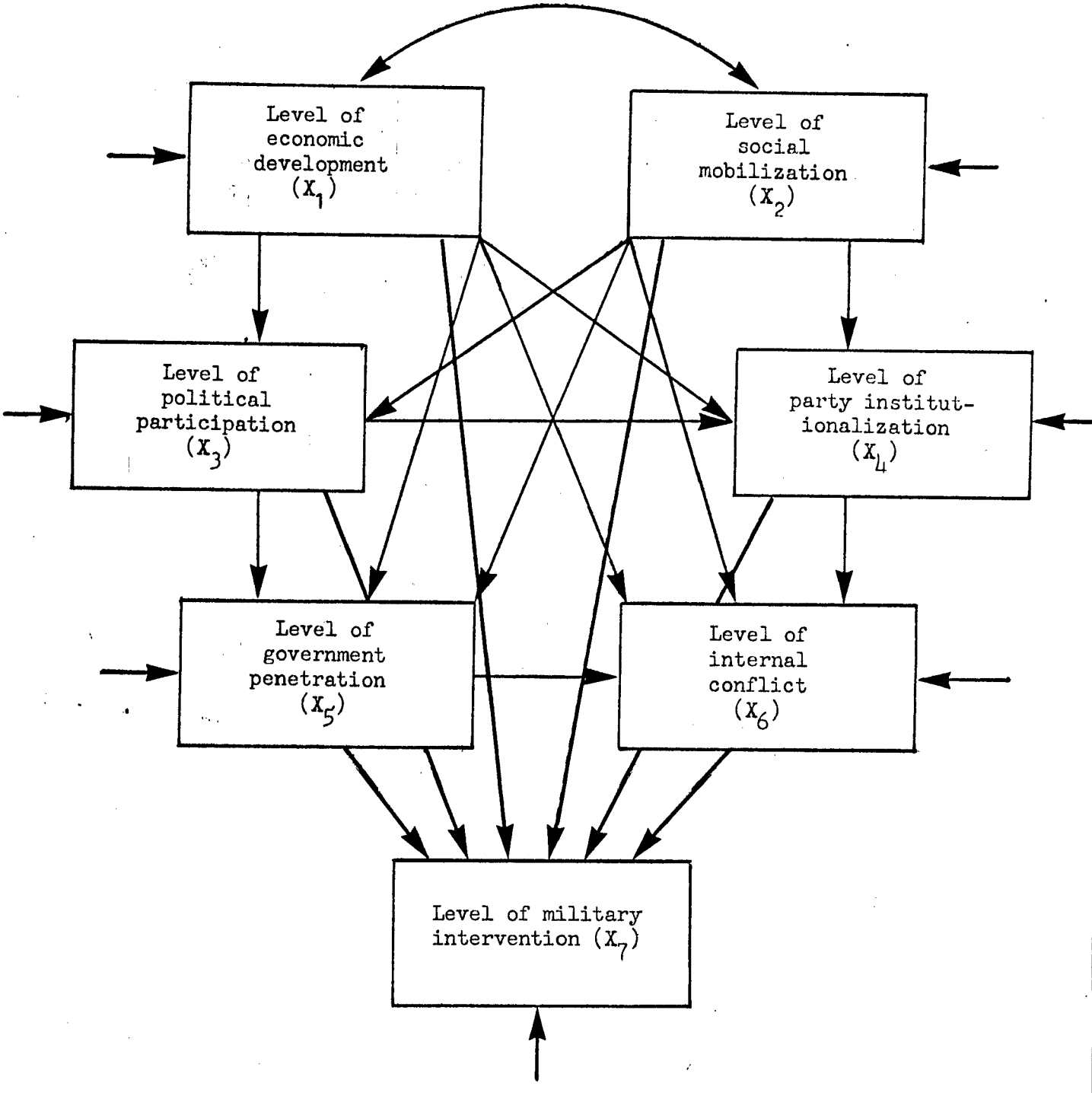
(2) No causal priority is established between the level of economic development and the level of social mobilization.

(3) The level of internal conflict existing in a society is hypothesized to be the variable most immediately connected with the level of military intervention. Therefore it is located at the end of the causal tree.

(4) The level of government penetration is determined by the level of socio-economic development and by the level of party institutionalization and political participation.

FIGURE 4

CAUSAL MODEL OF THE LEVEL OF MILITARY INTERVENTION



Explanation

Hypothesized causal relationships are represented by uni-directional causal arrows.

Non-causal relationships (between exogeneous variables) are represented by two-ended curvilinear arrows.

Relationships between residual variables and variables in the system are represented by uni-directional broken arrows.

(5) The level of political participation is located before the level of party institutionalization. This is a more arbitrary decision, but is based on the fact that individuals have to participate in the political process before political institutions can be built.

Figure 4 illustrates the causal order resulting from these decisions. For example, the level of political participation (X_3) is determined by the level of economic development (X_1) and the level of social mobilization (X_2); the level of party institutionalization (X_4) is determined by the levels of economic development, social mobilization and political participation and so on. The final system of equations is as follows:

(7.1) $X_3 = C_3 + a_{13}X_1 + a_{23}X_2 + e_3$

(7.2) $X_4 = C_4 + a_{14}X_1 + a_{24}X_2 + a_{34}X_3 + e_4$

(7.3) $X_5 = C_5 + a_{15}X_1 + a_{25}X_2 + a_{35}X_3 + a_{45}X_4 + e_5$

(7.4) $X_6 = C_6 + a_{16}X_1 + a_{26}X_2 + a_{36}X_3 + a_{46}X_4 + a_{56}X_5 + e_6$

(7.5) $X_7 = C_7 + a_{17}X_1 + a_{27}X_2 + a_{37}X_3 + a_{47}X_4 + a_{57}X_5 + a_{67}X_6 + e_7$

In this system of equations X represents the independent variables each of which, in turn, becomes a dependent variable; e_i symbolizes the residual variables; the a's stand for the unstandardized regression coefficients, and the C's for the constant terms.

The first two variables: the level of economic development (X_1) and the level of social mobilization (X_2) are entirely determined by their respective error terms (residual variables). Because of their

status as exogeneous variables the fact that these two variables are highly intercorrelated at the .82 level has little effect on the rest of the causal process.

The set of simultaneous equations thus obtained has been used by social scientists in two different ways, known as the Simon-Blalock and the Boudon methods.

The logic of the Simon-Blalock method requires some simplification of the assumptions concerning the a's in equations 7.1 to 7.5 to allow for an estimation of the various coefficients of regression.[7] For example, if a_{13} and a_{23} equal zero in equation 7.1, X_3 will no longer be dependent on X_1 and X_2 but entirely on the residual variable e_3 and on the constant term C_3.. This system of causal relationships will then have three instead of two exogeneous variables (X_1, X_2 and X_3). Because the system of structured equations is a recursive one, that is, without two-way causation among variables), ordinary least squares procedures and the pre-set values of X_1, X_2 and X_3 can be used to arrive at a non-biased estimate of X_4 and of the remaining a's. The trademark of the Simon-Blalock method has been to make various a's equal to zero and to see how well this simplified model succeeds in reproducing the full model (when no a's equal zero).

The Simon-Blalock method of using prediction equations thus permits a test of the adequacy of several models. That is, to what extent they fit the empirical reality. This method is consistent

TABLE XXXV

SYSTEM OF DEPENDENCE EQUATIONS

(7.17a)	$b_{13} + b_{23}r_{12} + r_{13}$	$= 0$
(7.17b)	$b_{13}r_{12} + b_{23} + r_{23}$	$= 0$
(7.18a)	$b_{14} + b_{24}r_{12} + b_{34}r_{13} + r_{14}$	$= 0$
(7.18b)	$b_{14}r_{12} + b_{24} + b_{34}r_{23} + r_{24}$	$= 0$
(7.18c)	$b_{14}r_{13} + b_{24}r_{23} + b_{34} + r_{34}$	$= 0$
(7.19a)	$b_{15} + b_{25}r_{12} + b_{35}r_{13} + b_{45}r_{14} + r_{15}$	$= 0$
(7.19b)	$b_{15}r_{12} + b_{25} + b_{35}r_{23} + b_{45}r_{24} + r_{25}$	$= 0$
(7.19c)	$b_{15}r_{13} + b_{25}r_{23} + b_{35} + b_{45}r_{34} + r_{35}$	$= 0$
(7.19d)	$b_{15}r_{14} + b_{25}r_{24} + b_{35}r_{34} + b_{45} + r_{45}$	$= 0$
(7.20a)	$b_{16} + b_{26}r_{12} + b_{36}r_{13} + b_{46}r_{14} + b_{56}r_{15} + r_{16}$	$= 0$
(7.20b)	$b_{16}r_{12} + b_{26} + b_{36}r_{23} + b_{46}r_{24} + b_{56}r_{25} + r_{26}$	$= 0$
(7.20c)	$b_{16}r_{13} + b_{26}r_{23} + b_{36} + b_{46}r_{34} + b_{56}r_{35} + r_{36}$	$= 0$
(7.20d)	$b_{16}r_{14} + b_{26}r_{24} + b_{36}r_{34} + b_{46} + b_{56}r_{45} + r_{46}$	$= 0$
(7.20e)	$b_{16}r_{15} + b_{26}r_{25} + b_{36}r_{35} + b_{46}r_{45} + b_{56} + r_{56}$	$= 0$
(7.21a)	$b_{17} + b_{27}r_{12} + b_{37}r_{13} + b_{47}r_{14} + b_{57}r_{15} + b_{67}r_{16} + r_{17}$	$= 0$
(7.21b)	$b_{17}r_{12} + b_{27} + b_{37}r_{23} + b_{47}r_{24} + b_{57}r_{25} + b_{67}r_{26} + r_{27}$	$= 0$
(7.21c)	$b_{17}r_{13} + b_{27}r_{23} + b_{37} + b_{47}r_{34} + b_{57}r_{35} + b_{67}r_{36} + r_{37}$	$= 0$
(7.21d)	$b_{17}r_{14} + b_{27}r_{24} + b_{37}r_{34} + b_{47} + b_{57}r_{45} + b_{67}r_{46} + r_{47}$	$= 0$
(7.21e)	$b_{17}r_{15} + b_{27}r_{25} + b_{37}r_{35} + b_{47}r_{45} + b_{57} + b_{67}r_{56} + r_{57}$	$= 0$
(7.21f)	$b_{17}r_{16} + b_{27}r_{26} + b_{37}r_{36} + b_{47}r_{46} + b_{57}r_{56} + b_{67} + r_{67}$	$= 0$

with Blalock's overall approach to causality. Blalock states "one can never demonstrate causality from correlational data, or in fact, from any type of empirical information (1964, p. 62)". He believes one can only make indirect causal inference by considering the adequacy of selective causal models. Only after the inadequate models have been successively eliminated does he feel confident "to make an out and out assumption that a given model is in fact correct (1964, p. 63).

Recently, Boudon, first in an article (1965) and later in a book (1967a), shows that by making use of the same formalization and the same assumptions as Blalock, not only the adequacy but also the strength of the causal relationships can be measured.[9] The formal derivation of this method can be found in appendix 4. Following his method we can derive a set of twenty equations (Table XXXV). By substituting the correlation coefficients (r) in this table each of the five subsets (7.17, 7.18, 7.19, 7.20, and 7.21) of equations can be solved, resulting in a set of dependence coefficients (b's).[10]

The dependence approach to causal modelling has several advantages over the Simon-Blalock method. First, dependence analysis allows for an assessment of the direct causal impact of each of the independent variables on the dependent variable and on other independent variables below it in the causal tree. Thus, not only the general physiognomy of the model is defined (as with the Simon-Blalock approach) but also

its internal workings. Second, dependence analysis distinguishes between direct and indirect causation. The indirect effect can be interpreted as the effect of the independent variable on the dependent variable through another independent variable. In more formal terms, if the causal effect of variable X on variable Y is defined by the bivariate correlation coefficient between the two variables, then the direct effect is estimated by the dependence coefficient and the indirect effect is estimated in the following way:

indirect effect of x on y = $r_{xy} - b_{xy}$

The ease with which dependence coefficients are derived should not direct attention away from the rigid assumptions on which this technique is based.

First, dependence analysis assumes that the equation is linear, that is, where the value of one variable is defined in terms of the sum of the values of those variables preceding it in the causal hierarchy.[12] Curvilinear and exponential relationships are not admissible under this assumption unless the non-linear variables are transformed.[13] On the basis of an examination of the graphic distribution of the independent variables none was shown to be distributed in a curvilinear way.[14] However, the assumption that a variable can be expressed as a combination, linear or not, of other variables remains an unproven assumption of any form of regression or causal analysis.

Second, it is further assumed that this system of causal relationships contains no reciprocal causation or feedback loops. This assumption is undoubtedly extensively violated in the present model. Indeed, it is difficult to imagine that variables such as the level of economic development and the level of social mobilization could exist in empirical isolation from each other.[15] Similarly, for the sake of causal modelling, it is assumed that internal conflicts are the consequences of the five other processes. Naturally, there is enough legitimate support to suggest the opposite hypothesis, that conflict is a cause and not a consequence of the level of political participation and government penetration. However, for the purpose of this study, the opposite assumption is retained.

Third, to make use of dependence analysis, the variables which are to be regarded as the causes and those which are to be regarded as effects at each stage of the process must be specified. Unfortunately, there is no statistical mechanism to check the validity of a particular causal order of variables. Each order will produce a causal model and a set of dependence coefficients which will fit the empirical data. Therefore, although some theoretical justification is given for the causal ordering presented here, it should be stressed that a different order, possibly an equally plausible one, would have produced an entirely different set of dependence coefficients. In a seven variable model there are as many as 5,040 different models which can

be built, assuming no certainty as to the position of all seven variables in the causal tree. However, such uncertainty would make little sense theoretically and would be equivalent to a completely random approach to model and theory building.

Fourth, to be able to solve the different systems of equations it is assumed that the disturbance terms (the e's) in the system are uncorrelated, except for the two initial exogeneous variables, where correlation makes no difference. This requirement implies that all the input variables have been included so that there are no forgotten variables which also act simultaneously on the dependent variable and one or more of the independent variables. With only 40 per cent of the variance explained, the probability that no important variables have been excluded remains low. Other characteristics of the environment of African military organizations for which there is no measurement and which influence both the dependent and independent variables have undoubtedly been left out of the model. The incorporation of variables such as the level of bureaucratization, the level of elite fragmentation and the importance of ethnic divisions would certainly have reduced the size of the unexplained variance. Also a number of the variables on which limited statistical information was available, particularly the internal organization of the African armed forces (size, military expenditures and so on) were left out of the model. Their causal

contribution, if it could be coherently incorporated would have further increased the explanatory power of the model. If the error terms are in fact correlated, the values of the dependence coefficients which are calculated in Table XXXV may be overestimations of their true values.

This approach to the identification problem thus closely resembles the attitude criticized by Blalock (1970a): "that of acknowledging the existence of measurement errors, and even discussing possible sources of such errors, while completely ignoring them in the analysis stage of the research process (p. 1099)."[16] In recent years, researchers have paid more attention to both measurement and identification of errors and have suggested ways of incorporating their impact into the research design. The approach suggested by Duncan (1969), Siegel and Hodge (1968) and Wiley (1970) is to provide "plausible" estimates of the efforts and to trace their influence through the causal process in order to determine their impact by comparing them with alternate, causal models using the same estimated error. Blalock, who judges this procedure as too cumbersome, suggests that multiple indicators be used for each variable that is imperfectly measured. Although this procedure has not been used for this study, the use of multiple indicators at the earlier stage of variable construction has served an almost identical purpose.[17]

Finally, it is not possible to obtain accurate estimates of the direct and indirect effects of variables if the sources of variation for these variables are not sufficiently differentiated. A high level of intercorrelation between two or more of the independent variables renders the sample error of the partial correlations and partial slopes quite large, making it difficult to distinguish between different combinations of regression coefficients all fitting equally well the empirical data. Table XXXVI shows that some multi-collinearity is present between the six composite variables although the problem is not overwhelming. Only five of the 15 correlations between the independent variables are higher than .50 with one correlation as high as .82. In this single case, the two variables so closely linked are located at the top of the causal tree and are considered exogeneous variables. Blalock (1963), Forbes and Tufts (1968) and Farrar and Blauber (1967) have suggested that in such a case multi-collinearity does not constitute a major issue since no causal links are assumed to exist between the two variables. Consequently, there is no indirect effect of one through the other. However, even if the variables are highly correlated from a statistical point of view, the composite variables for the level of economic development and the level of social mobilization should both be considered distinct variables in the model since factor analysis suggests that there are legitimate grounds for distinguishing them conceptually. In the case of other intercorrelations between the variables, their number, strength, and the absence of distinctive patterns between them makes them of less significance.[18] All

TABLE XXXVI

CORRELATION MATRIX OF THE INDEPENDENT COMPOSITE VARIABLE

	ECONOC	MOBILI	PARTIC	INSTIT	PENETR	CONFLI
ECONOC	-					
MOBILI	.82	-				
PARTIC	.24	.13	-			
INSTIT	.06	.30	-.54	-		
PENETR	.39	.54	.09	.16	-	
CONFLI	-.15	.01	-.59	.59	-.02	-

ECONOC: Level of economic development
MOBILI: Level of social mobilization
PARTIC: Level of political participation
INSTIT: Level of party institutionalization
PENETR: Level of government penetration
CONFLI: Level of internal conflict

these assumptions should be kept in mind in looking at the results of the dependence analysis.

The Findings of the Causal Model

All the dependence coefficients are listed in Table XXXVII, while Figure 5 summarizes the more important causal relationships found in the model.[19] To facilitate comparison with the results of the bivariate and regression analysis Table XXXVIII lists side by side the correlation, regression and path coefficients of the composite variables.

The most obvious fact revealed by these tables is that no composite independent variable, except the level of internal conflict, appears to be making a strong direct impact on the level of military intervention in politics. Clearly this confirms CONFLI as a good predictor of military intervention as suggested by hypothesis B27. Second, with the exception of the level of government penetration, the dependence coefficient of the other composite variables is lower than their respective correlation coefficients. This is due mainly to the decomposition of the causal effect in a direct and an indirect effect. The level of party institutionalization which was hypothesized (B19) to have a moderated impact on the level of military involvement suffers the greatest decline: from a correlation coefficient of .38 to a dependence coefficient of .16. Third, while the level of political participation was negatively associated with the level of military involvement at the bivariate and regression level, its relationship

TABLE XXXVII

DEPENDENCE COEFFICIENTS FOR THE SIX INDEPENDENT VARIABLES IN THE CAUSAL MODEL

b_{13}	=	.41	b_{16}	=	-.12
b_{23}	=	-.20	b_{26}	=	.06
			b_{36}	=	-.35
b_{14}	=	-.35	b_{46}	=	.40
b_{24}	=	.65	b_{56}	=	-.03
b_{34}	=	-.54			
			b_{17}	=	-.10
b_{15}	=	-.19	b_{27}	=	.05
b_{25}	=	.69	b_{37}	=	.19
b_{35}	=	.03	b_{47}	=	.16
b_{45}	=	-.02	b_{57}	=	-.18
			b_{67}	=	.58

FIGURE 5

CAUSAL MODEL INDICATING THE MOST IMPORTANT CAUSAL RELATIONSHIPS

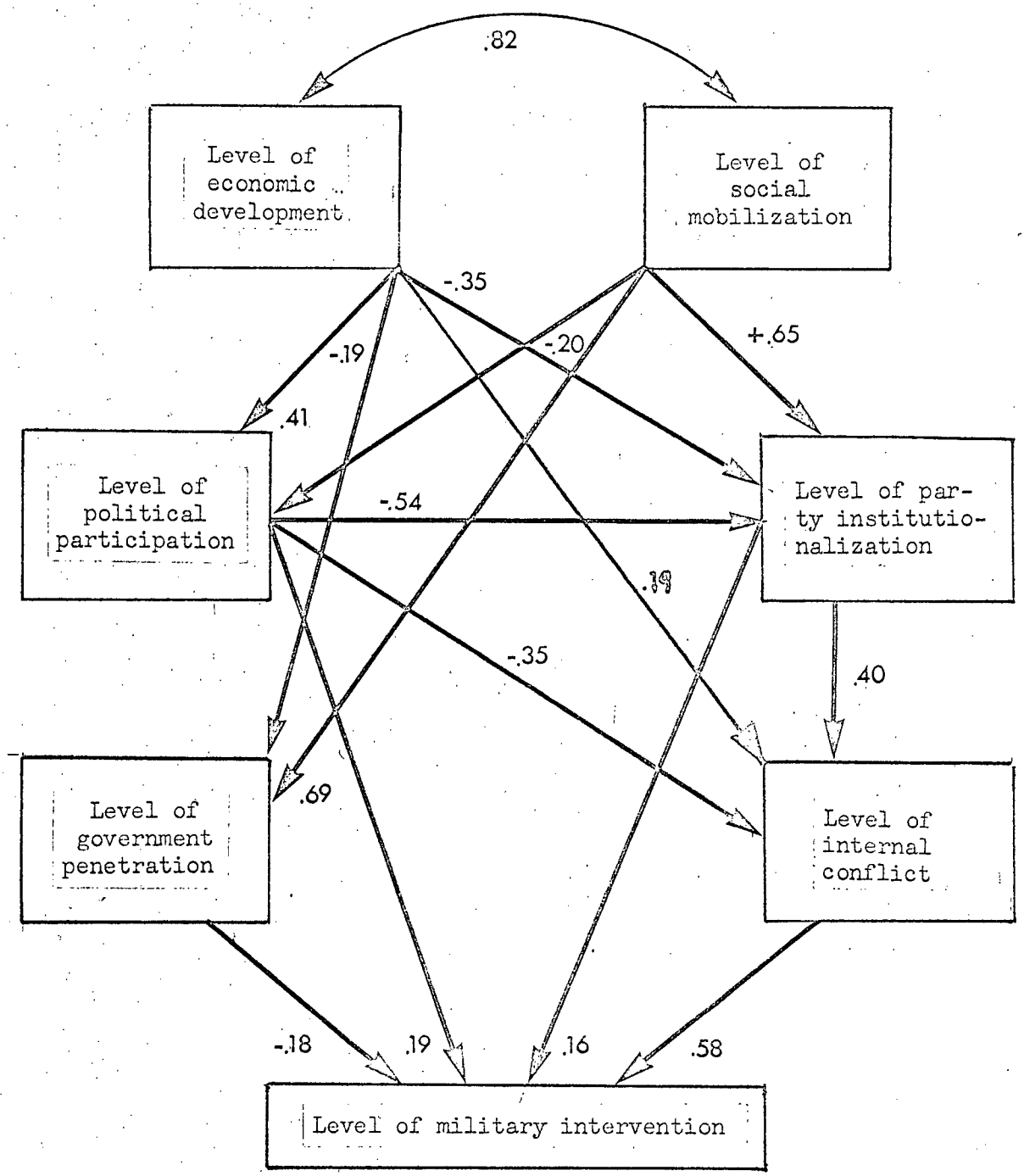


TABLE XXXVIII

COMPARISON OF THE CORRELATION, REGRESSION AND DEPENDENCE COEFFICIENTS OF THE COMPOSITE INDEPENDENT VARIABLES AND THE DEPENDENT VARIABLE

Composite Variable	Correlation Coefficient	Regression Coefficient	Dependence Coefficient	Indirect Effect
The level of economic development	-.16	-1.17	-.10	-.06
The level of social mobilization	-.05	.44	.05	-.10
The level of political participation	-.27	-2.78	.19	-.08
The level of party institutionalization	.38	+2.33	.16	.22
The level of government penetration	-.16	-2.28	-.18	-.02
The level of internal conflict	.58	+7.77	.58	.00

Source: Tables XXIV and XXXVII.

with the dependent variable is here transformed into a positive one. According to dependent analysis, the level of political participation and party institutionalization are negatively intercorrelated at the -.54 level (a surprising finding) although their individual causal impact on military involvement is in both cases a positive one. It would then seem that in Africa, a high level of political participation and party institutionalization contribute favourably to military intervention. This constitutes a net reversal of hypothesis B15 which suggested that a high level of political participation decreased the possibility of military involvement in politics.

Finally, dependence analysis suggests that the level of economic development is an inhibiting factor, albeit a weak one (-.10) on military involvement in politics, while the level of social mobilization constitutes a weak contributing force (.05). In the case of social mobilization this constitutes a reversal of the finding which emerged from bivariate analysis (B9). As in the case of the level of political participation, this reversal in causal impact of the level of social mobilization from correlation to dependence analysis is easily explained by the workings of their indirect effect on the dependent variable (Table XXXVIII). Both variables have a direct, positive impact on the dependent variable but their indirect effect on the dependent variable through the other variables in the model is a negative one. For example, a high level of social mobilization increases, if only

very weakly the probability of military intervention in politics. However, at the same time, this high level of mobilization markedly increases the probability of a high level of party institutionalization (.65) and a high level of government penetration (.69), both of which in turn decrease the probability of military intervention (-.35 and -.18). A similar process is at work in the case of political participation (Figure 5).

The Dynamics of the Causal Model

Turning to the internal dynamics of the causal model, it is possible to appreciate the flexibility of the dependence approach to causal modelling. Table XXXIX gives the coefficient of indirect effect for each composite variable on each other variable below it in the causal tree. Table XL lists the various ways by which each independent variables influences the dependent variable. These two tables confirm the importance of the level of internal conflict as the key intermediate variable through which the indirect effects of political participation, party institutionalization and (to a lesser extent) economic development on military involvement are channelled. It is the only variable to exert such an influence, and this fact adds weight to the funnel hypothesis suggested in the previous chapter.

Tables XXXIX and XL also reveal the importance of the variable of political participation. Although not a good predictor of military intervention in politics, the level of political participation and to

TABLE XXXIX

COEFFICIENTS OF TOTAL INDIRECT EFFECT FOR EACH OF THE COMPOSITE VARIABLES

Total Indirect Effect of the Level of Economic Development on:		
Level of political participation	=	-.17
Level of party institutionalization	=	.41
Level of government penetration	=	.58
Level of internal conflict	=	-.03
Level of military involvement	=	-.06
Total Indirect Effect of the Level of Social Mobilization on:		
Level of political participation	=	.33
Level of political institutionalization	=	-.35
Level of government penetration	=	-.15
Level of internal conflict	=	.00
Level of military involvement	=	-.10
Total Indirect Effect of the Level of Political Participation on:		
Level of political institutionalization	=	.00
Level of government penetration	=	.06
Level of internal conflict	=	-.24
Level of military involvement	=	.08
Total Indirect Effect of the Level of Party Institutionalization on:		
Level of government penetration	=	.18
Level of internal conflict	=	.19
Level of military involvement	=	.22
Total Indirect Effect of the Level of Government Penetration on:		
Level of internal conflict	=	.01
Level of military involvement	=	-.02
Total Indirect Effect of the Level of Internal Conflict on:		
Level of military involvement	=	.00

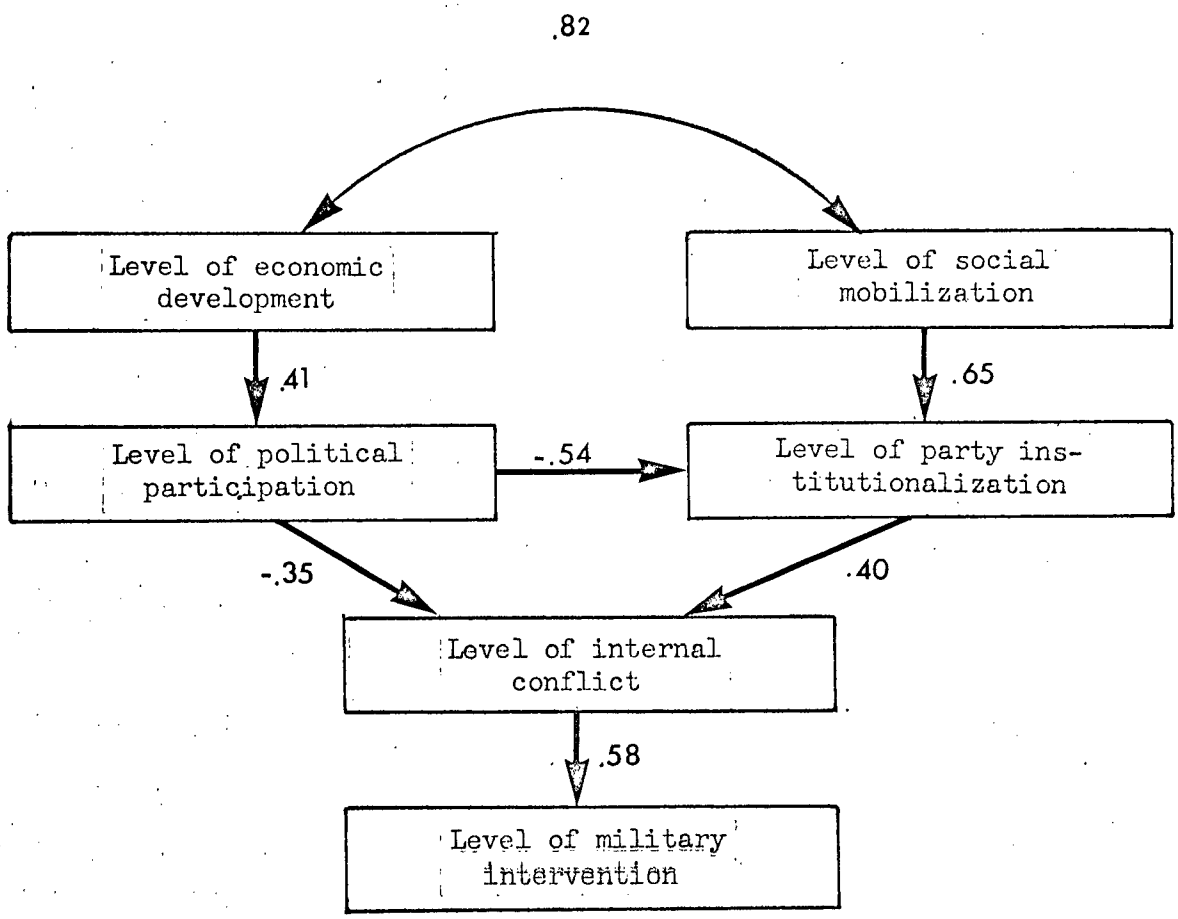
TABLE XL

DIFFERENT PATHS OF INDIRECT EFFECT ON THE DEPENDENT VARIABLES FOR EACH OF THE COMPOSITE VARIABLES

Total Indirect Effect of the Level of Economic Development on the Level of Military Involvement through:		
Level of political participation	=	.05
Level pf party institutionalization	=	.01
Level of government penetration	=	-.07
Level of internal conflict	=	-.09
Total Indirect Effect of the Level of Social Mobilization on the Level of Military Involvement through:		
Level of political participation	=	.02
Level of party institutionalization	=	.05
Level of government penetration	=	-.10
Level of internal conflict	=	.01
Total Indirect Effect of the Level of Political Participation on the Level of Military Involvement through:		
Level of party institutionalization	=	-.09
Level of government penetration	=	-.02
Level of internal conflict	=	-.34
Total Indirect Effect of the Level of Party Institutionalization on the Level of Military Involvement through:		
Level of government penetration	=	-.03
Level of internal conflict	=	.34
Total Indirect Effect of the Level of Government Penetration on the Level of Military Involvement through:		
Level of internal conflict	=	.01

FIGURE 6

CAUSAL MODEL INCLUDING ONLY THOSE DEPENDENCE COEFFICIENTS WHICH ARE ≥

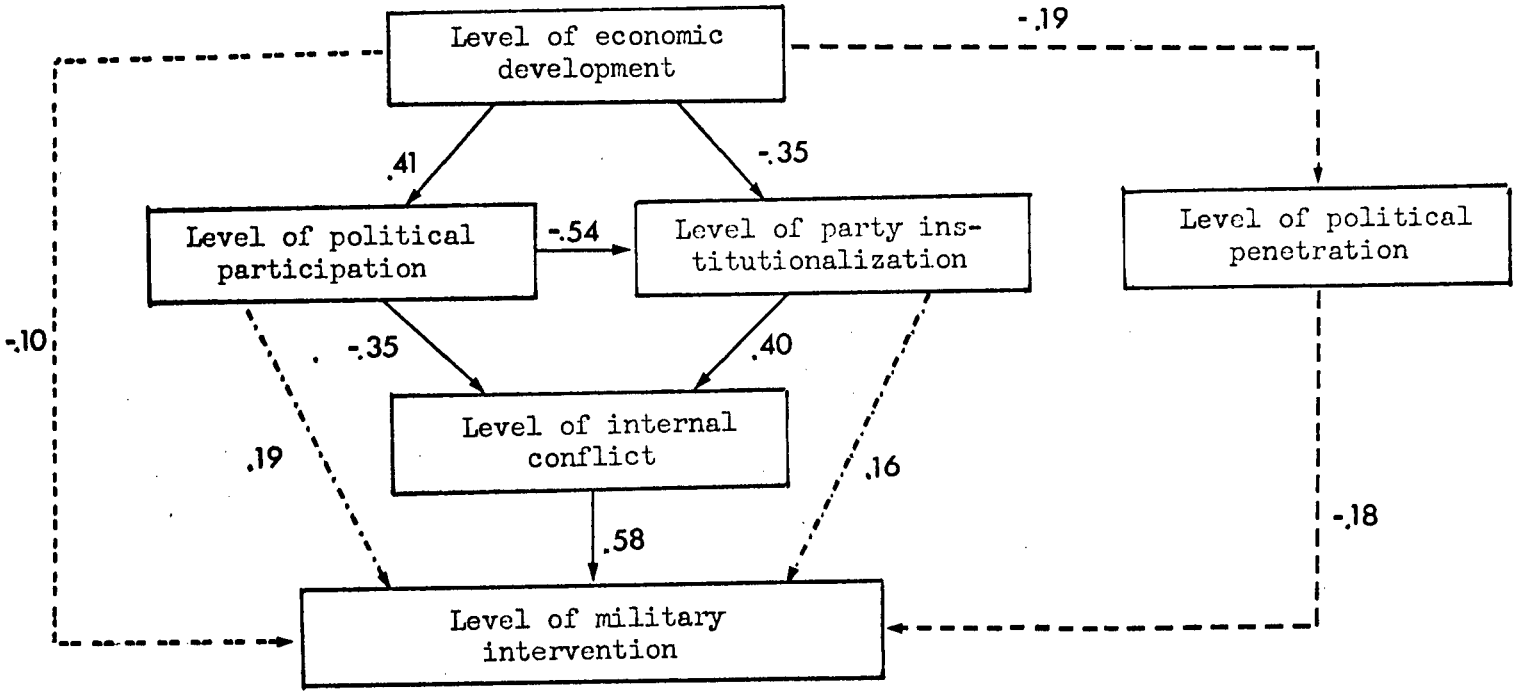


a lesser extent the level of party institutionalization can be considered as a link between the socio-economic variables on one side and military intervention and its immediate predictor, the level of internal conflict, on the other. Figure 6, where only the dependence coefficients .40 are retained illustrates the linkage nature of the three political variables. The coefficients of total indirect effect (Table XXXIX) also give some support to this interpretation. For example, the level of economic development and the level of social mobilization both have high indirect effects on all three political variables which constitute the next category of variables in the causal tree. In contrast, their indirect effect on internal conflict and on the level of military intervention is almost negligible. Similarly, except for government penetration which evidently does not constitute an important component of the causal model, the two other political variables have strong indirect effects on the conflict variable.

In Figures 7, 8, 9 and 10, the various causal paths through which each independent variable exercises its influence are isolated. Figures 7 and 8 reveal that the levels of economic development and of social mobilization influence the level of military involvement through eight major paths. These eight causal paths can be divided into four distinct clusters: the direct path at the -.10 and .05 level, a second path directly through political penetration; a third path

FIGURE 7

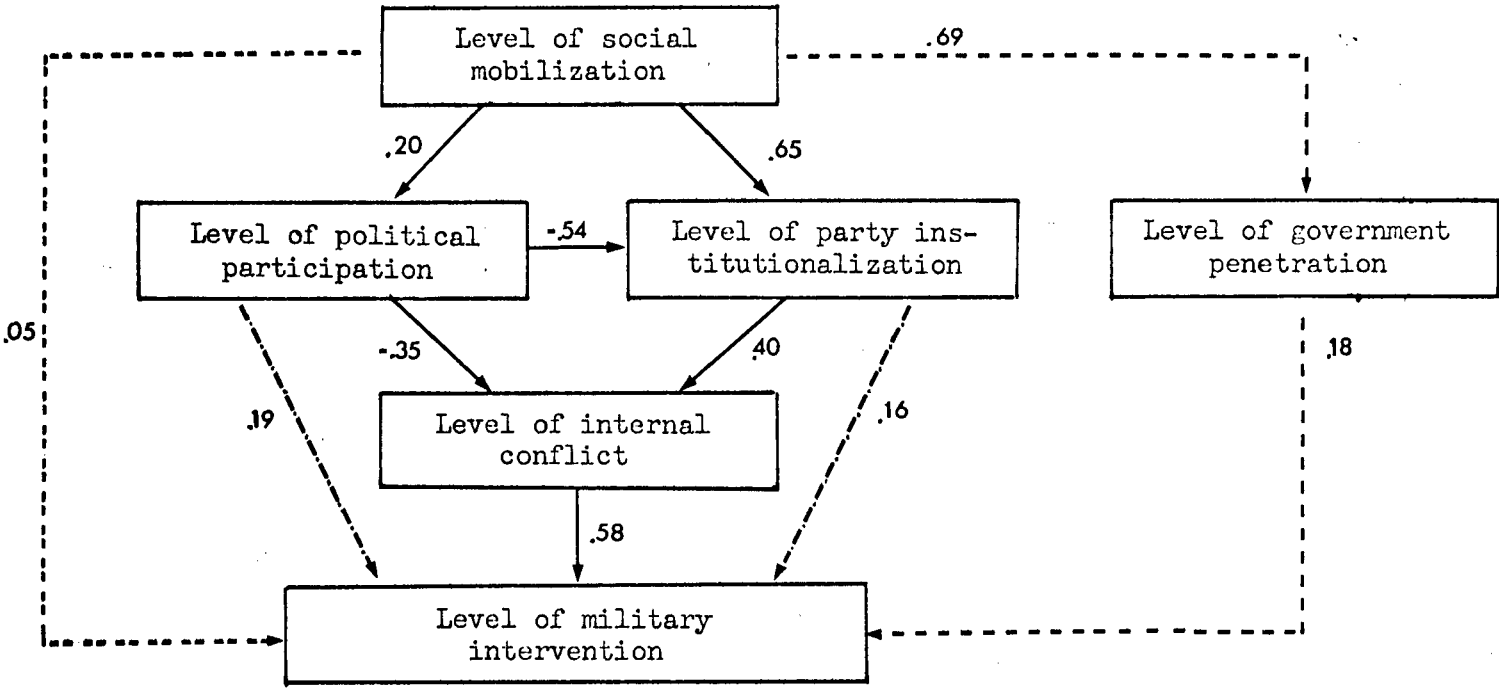
MAJOR CAUSAL PATHS OF THE LEVEL OF ECONOMIC DEVELOPMENT



Causal paths (indicated by the different dotted lines)	Sign of the causal impac
Economic ⟶ intervention	(-)
Economic ⟶ penetration ⟶ intervention	(+)
Economic ⟶ participation ⟶ intervention	(+)
Economic ⟶ institutionalization ⟶ intervention	(-)
Economic ⟶ participation ⟶ conflict ⟶ intervention	(-)
Economic ⟶ institutionalization ⟶ conflict ⟶ intervention	(-)
Economic ⟶ participation ⟶ institutionalization ⟶ intervention	(-)
Economic ⟶ participation ⟶ institutionalization ⟶ conflict ⟶ intervention	(-)

FUGURE 8

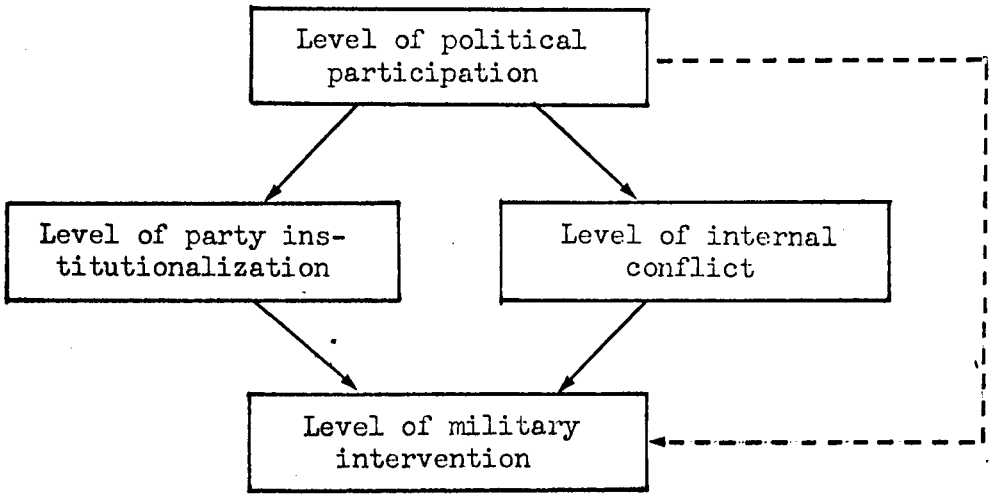
MAJOR CAUSAL PATHS OF THE LEVEL OF SOCIAL MOBILIZATION



Causal paths	Sign of the causal impact
Mobilization⟶intervention	(+)
Mobilization⟶penetration⟶intervention	(-)
Mobilization⟶participation⟶intervention	(-)
Mobilization⟶institutionalization⟶intervention	(+)
Mobilization⟶participation⟶ conflict⟶intervention	(+)
Mobilization⟶institutionalization⟶conflict⟶intervention	(+)
Mobilization⟶participation⟶institutionalization⟶intervention	(+)
Mobilization⟶participation⟶institutionalization⟶conflict⟶interv.	(+)

FIGURE 9

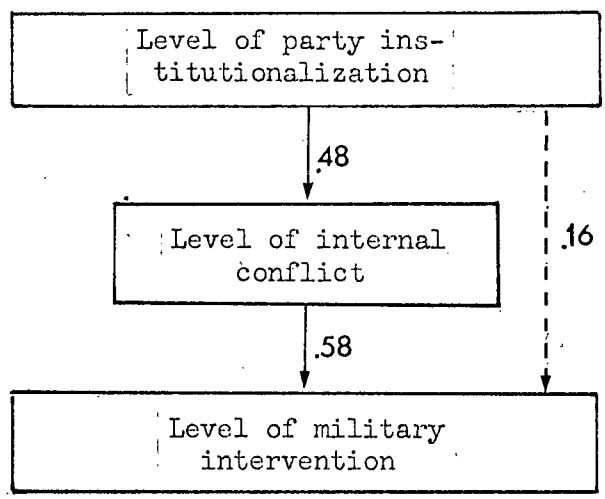
MAJOR CAUSAL PATHS OF THE LEVEL OF POLITICAL PARTICIPATION



Causal paths	Sign of the causal impact
Participation⟶intervention	(+)
Participation⟶institutionalization⟶intervention	(-)
Participation⟶conflict⟶intervention	(-)
Participation⟶institutionalization⟶conflict⟶intervention	(-)

FIGURE 10

MAJOR CAUSAL PATHS OF THE LEVEL OF PARTY INSTITUTIONALIZATION



Causal paths	Sign of the causal impact
Institutionalization ⟶ intervention	(+)
Institutionalization ⟶ conflict ⟶ intervention	(+)

through political participation and party institutionalization and finally a path first through political participation and party institutionalization and then through the level of internal conflict. In the case of the level of social mobilization and the level of economic development, this last path seems to be the most important, not so much in terms of the size of the dependence coefficients involved but because it is there that the causal dynamics seem to be concentrated. However, the similarity between the causal impact of economic development and social mobilization ends here. In all four causal paths the two variables have a divergent causal impact. First, with regard to the direct path, a high level of economic development inhibits military intervention in the political process while a high level of social mobilization encourages such an intervention. Second, economic development inhibits while social mobilization strongly encourages a high level of government penetration which in turn decreases the probability of military intervention. Third, economic development and social mobilization have divergent impacts on political participation and party institutionalization. A high level of economic development increases the probability of a high level of political participation while inhibiting a high level of party institutionalization, while a high level of social mobilization has the opposite effect. In fact, because of the strong negative impact of political participation on party institutionalization, the overall impact, both direct and

indirect through political participation, of economic development on party institutionalization is negative, while the overall effect of social mobilization on the level of military intervention is clearly positive. A comparison of the direction of the impact of the different paths through which the effect of both variables is carried shows that while a high level of economic development on the whole, decreases the probability of a high level of military intervention in politics, the pattern for social mobilization is the reverse.

Contrary causal impacts can also be found by comparing the effect of political participation and party institutionalization (Figures 9 and 10). Except at the direct level, a high level of political participation decreases the likelihood of a high level of military intervention while the level of party institutionalization apparently increases such a likelihood.

Before attempting to give more conceptual coherence to these partial results, the causal model should be more closely examined, by breaking down some of the composite independent variables into their initial basic variables.

The Content of the Causal Model

Without disturbing the causal hierarchy there are still 108,000 different models which can be built using different combinations of basic variables instead of composite variables.[21] This study is

limited to 37 such models. To further verify the plausibility of the dependence coefficients determined through dependence analysis using the six composite variables as predictors, the same causal tree has been used in each case but with each basic variable replacing, in turn the corresponding composite variable. The results are presented in Tables XLI, XLII, XLIII, XLIV, XLV and XLVI. Although difficult to interpret, these tables nevertheless provide valuable additional information on individual causal patterns. Table XLVII which lists the correlation, regression and dependence coefficients of the basic variables, is designed to facilitate a comparison with the results of the bivariate and regression analyses.

Clearly these tables confirm the causal predominance of internal conflict as a determinant of the level of military involvement. In only four out of 30 instances does the dependence coefficient (b_{wy}) arrived at by using basic variables instead of CONFLI depart markedly in sign and intensity from the .58 coefficient attained with the composite variable. The four basic variables (V20, V32, V38 and V47) which do not conform to the general trend do not appear to be conceptually distinguishable from the others except that their respective dependence coefficients seem to be either surprisingly high or surprisingly low. In conclusion, the high and positive causal impact of internal conflict on military participation first suggested in

TABLE XLI

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF ECONOMIC DEVELOPMENT INSTEAD OF THE COMPOSITE VARIABLE ECONOC

Dependence Coefficients	ECONOC*	V1	V2	V6	V12	V18	V19	V20	V26	V28
b_{13}	.41	-.12	-.46	-.02	-.04	-.27	-.74	.01	-.41	-.14
b_{23}	-.20	.19	.46	.02	.11	.31	.68	.03	.42	.03
b_{14}	-.35	.32	-.34	.01	-.47	-.44	-.01	.54	-.60	-.28
b_{24}	.65	.22	.63	0.01	.13	.68	.01	.02	.82	.18
b_{34}	-.54	-.56	-.67	.00	-.60	-.66	-.01	.01	-.71	-.61
b_{15}	-.19	.17	.07	.10	.21	.91	.00	.37	.48	.10
b_{25}	.69	.47	.47	.41	.59	-.24	.00	.77	.09	.59
b_{35}	.03	.00	.06	.13	.11	.40	.00	.02	.26	.05
b_{45}	-.02	-.06	.04	.10	.14	.40	.00	-.96	.25	.04
b_{16}	-.12	.00	-.48	.41	-.40	-.28	.34	.13	-.76	.17
b_{26}	.06	-.06	.34	-.60	-.20	.10	-.48	.12	.56	.05
b_{36}	-.35	-.35	-.54	.08	-.50	-.47	-.09	.12	-.73	-.32
b_{46}	.40	.42	.29	.80	.18	.30	.68	-.17	.05	.46
b_{56}	-.03	-.03	-.01	.00	.35	.14	.10	.45	.14	-.03
b_{17}	-.10	.03	-.48	-.33	-.29	-.14	.26	.01	.07	.18
b_{27}	.05	-.05	.34	.38	-.15	.03	-.37	-.83	-.10	.07
b_{37}	.19	.19	-.05	-.19	.04	.13	.41	.51	.24	.22
b_{47}	.16	.17	.12	-.07	.05	.13	.37	.15	.20	.23
b_{57}	-.18	-.18	-.16	-.20	-.13	-.09	-.08	-.18	.19	-.18
b_{67}	.58	.59	.42	.46	.48	.57	.60	-.17	.61	.56

TABLE XLI (Cont.)

* the first column lists the dependence coefficients using the composite variable ECONOC

V1 Money deposits, 1963
V2 Paper money in circulation, 1963
V6 GDP per capita, 1958
V12 Percentage in agriculture, 1958
V18 Energy consumption, 1963
V19 Energy consumption, 1966
V20 Percentage of wage-earners, 1963
V26 Trade as percentage of GNP, 1968
V28 Inhabitants per doctor

TABLE XLII

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF SOCIAL MOBILIZATION INSTEAD OF THE COMPOSITE VARIABLE MOBILI

Dependence Coefficients	MOBILI*	V30	V31	V32	V33	V34	V35	V36	V37
b_{13}	.41	.56	.40	.01	.74	.01	.22	.48	.48
b_{23}	-.20	-.53	.33	-.97	-.80	-.01	.04	-.37	-.45
b_{14}	-.35	.28	.37	.01	.01	.03	-.07	.12	.40
b_{24}	.65	-.11	-.31	-.01	-.01	-.03	.50	.12	-.32
b_{34}	-.54	-.63	-.67	-.01	-.01	-.02	-.60	-.56	-.70
b_{15}	-.19	-.01	.49	-.02	-.01	.06	.52	.45	.58
b_{25}	.69	.50	.22	.03	.02	-.06	-.38	-.15	-.34
b_{35}	.03	.31	.01	.02	.02	-.04	.24	.09	-.06
b_{45}	.02	.24	.13	.01	.01	.03	.40	.21	.11
b_{16}	-.12	.03	.12	-.04	.03	-.01	-.18	-.04	-.08
b_{26}	.06	-.18	-.29	.05	-.04	.01	-.18	-.05	-.01
b_{36}	-.35	-.42	-.47	.03	-.04	.50	-.41	-.35	-.35
b_{46}	.40	.39	.33	.03	-.02	.01	.31	.42	.41
b_{56}	-.03	.03	-.01	-.02	.01	-.39	.02	-.03	-.02
b_{17}	-.10	-.52	-.05	.05	.16	.00	.04	-.27	-.24
b_{27}	.05	.74	-.02	-.06	-.30	-.08	-.20	.29	.23
b_{37}	.19	.55	.18	-.04	-.13	-.13	.28	.25	.31
b_{47}	.16	.24	.17	-.03	.06	.14	.27	.14	.23
b_{57}	-.18	-.39	-.17	.02	-.10	-.14	-.22	-.14	-.12
b_{67}	.58	.68	.57	-.04	.40	.56	.61	.59	.58

TABLE XLII (Cont.)

* The first column lists the dependence coefficients using MOBILI

V30 Percentage of population in cities, 1965
V31 Radios per capita, 1965
V32 Telephones per capita, 1968
V33 Commercial vehicules per capita, 1966
V34 Automobiles per capita, 1966
V35 Secondary school enrollment, 1962
V36 Secondary school enrollment, 1966
V37 Percentage in post-secondary schools, 1961

TABLE XLIII

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF POLITICAL PARTICIPATION INSTEAD OF THE COMPOSITE VARIABLE PARTIC

Dependence Coefficients	PARTIC*	V38	V39	V40	V41
b_{13}	.41	-.34	.15	-.51	.00
b_{23}	-.20	.39	-.21	.71	.16
b_{14}	-.35	-.78	-.62	-.93	-.57
b_{24}	.65	.01	.82	.01	.86
b_{34}	-.54	-.63	-.06	-.70	-.55
b_{15}	-.19	-.21	-.83	-.76	-.18
b_{25}	.69	.74	.01	.01	.70
b_{35}	.03	-.04	.64	-.63	.00
b_{45}	.02	-.07	-.07	-.49	-.04
b_{16}	-.12	-.69	.04	-.91	-.24
b_{26}	.06	.67	-.28	.01	.14
b_{36}	-.35	-.72	-.17	-.78	-.26
b_{46}	.40	.08	.63	.04	.44
b_{56}	-.03	.06	.05	-.33	-.04
b_{17}	-.10	-.53	-.11	.65	-.08
b_{27}	.05	.58	.15	-.99	.06
b_{37}	.19	-.51	.93	.72	.05
b_{47}	.16	-.11	-.04	.44	.11
b_{57}	-.18	-.21	-.71	.10	-.18
b_{67}	.58	.21	.61	.80	.52

* The first column lists the dependence coefficients using the composite variable PARTIC

V38 Percentage of votes cast for ruling party in last election before independence
V39 Number of national elections
V40 Turnout in first election after independence
V41 Percentage of votes cast for ruling party in first election after independence

TABLE XLIV

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF PARTY INSTITUTIONALIZATION INSTEAD OF THE COMPOSITE VARIABLE INSTIT

Dependence Coefficients	INSTIT*	V42	V43	V44	V45
b_{13}**	.41	.41	.41	.41	.41
b_{23}	-.20	-.20	-.20	-.20	-.20
b_{14}	-.35	.68	.57	.09	.33
b_{24}	.65	-.64	-.47	-.26	-.32
b_{34}	-.54	.39	.47	.52	.48
b_{15}	-.19	-.40	-.27	-.20	-.22
b_{25}	.69	.89	.76	.74	.72
b_{35}	.03	-.08	-.03	-.08	-.02
b_{45}	.02	.33	.15	.24	.13
b_{16}	-.12	-.01	-.01	-.36	-.68
b_{26}	.06	.02	.01	.65	.81
b_{36}	-.35	-.01	-.01	-.97	-.01
b_{46}	.40	.02	.02	.79	.01
b_{56}	-.03	-.50	-.25	-.23	-.20
b_{17}	-.10	-.12	-.11	-.12	-.15
b_{27}	.05	.11	.10	.10	.15
b_{37}	.19	.16	.18	.20	.12
b_{47}	.16	-.02	-.03	-.06	-.01
b_{57}	-.18	-.17	-.17	-.16	-.18
b_{67}	.58	.66	.68	.68	.62

* The first column lists the dependence coefficients using the composite variable INSTIT.

** Coefficients b_{13} and b_{23} remain the same because they are not affected by a change in the value of the lower predictors.

V42 Number of parties with legislative representation at independence
V43 Number of parties not banned for the entire 1960-69 period
V44 Number of splits in parties
V45 Legislative fractionalization at independence

TABLE XLV

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF GOVERNMENT PENETRATION INSTEAD OF THE COMPOSITE VARIABLE PENETR

Dependence Coefficients	PENETR*	V46	V47	V48	V49	V50
b_{13}**	.41	.41	.41	.41	.40	.40
b_{23}	-.20	-.20	-.20	-.20	-.20	-.20
b_{14}	-.35	-.35	-.35	-.35	-.35	-.35
b_{24}	.65	.65	.65	.65	.65	.65
b_{34}	-.54	-.54	-.54	-.54	-.54	-.54
b_{15}	-.19	.66	.01	.58	.25	.01
b_{25}	.69	.15	.02	-.38	.01	-.02
b_{35}	.03	-.53	.87	.12	-.01	.01
b_{45}	.02	-.28	.01	.40	-.99	.02
b_{16}	-.12	.17	.01	-.12	-.26	-.29
b_{26}	.06	.10	-.02	.03	-.60	.24
b_{36}	-.35	-.58	.52	-.35	.37	-.50
b_{46}	.40	.28	.02	.39	.01	.13
b_{56}	-.03	-.43	-.01	-.01	.61	.14
b_{17}	-.10	-.35	-.01	.06	-.01	-.23
b_{27}	.05	-.15	.01	-.16	.23	.13
b_{37}	.19	.48	-.56	.22	-.22	-.07
b_{47}	.16	.23	-.68	.24	-.06	-.14
b_{57}	-.18	.46	.73	-.21	-.29	.14
b_{67}	.58	.74	.23	.59	.41	.66

* The first column lists the dependence coefficients using the composite variable PENETR.

** Coefficients b_{13}, b_{23}, b_{24}, b_{34} stay the same because they are not affected by a change in the value of the lower predictors.

V46 Government revenues as percentage of GNP, 1966
V47 Rate of growth of the ratio of government spendings to GNP, 1963/65
V48 Rate of growth of the central government revenues, 1963/66
V49 Government spendings per capita in U.S. dollars, 1966
V50 Rate of growth of the ratio of government spendings to GNP, 1963/68

TABLE XLVI

DEPENDENCE ANALYSIS USING THE BASIC INDICATORS OF THE LEVEL OF INTERNAL CONFLICT TO REPLACE THE COMPOSITE VARIABLE CONFLI

Dependence Coefficients	CONFLI*	V51	V52	V53	V54	V55	V56	V57
b_{13}**	.41	.41	.41	.41	.41	.41	.41	.41
b_{23}	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20
b_{14}	-.35	-.35	-.35	-.35	-.35	-.35	-.35	-.35
b_{24}	.66	.66	.66	.66	.66	.66	.66	.66
b_{34}	-.54	-.54	-.54	-.54	-.54	-.54	-.54	-.54
b_{15}	-.19	-.19	-.19	-.19	-.19	-.19	-.19	-.19
b_{25}	.69	.69	.69	.69	.69	.69	.69	.69
b_{35}	.03	.03	.03	.03	.03	.03	.03	.03
b_{45}	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02
b_{16}	-.12	.64	.14	.01	.18	.57	.57	.55
b_{26}	.06	-.10	-.71	-.02	-.01	-.20	-.01	-.01
b_{36}	-.35	.91	.01	.01	.01	.77	.01	.01
b_{46}	.40	.11	.01	.02	.02	.77	.01	.01
b_{56}	-.03	.08	-.11	.09	.11	-.14	.16	.18
b_{17}	-.10	-.01	.29	.27	.31	-.24	.65	.30
b_{27}	.05	.02	-.02	-.01	-.01	-.14	-.02	-.01
b_{37}	.19	-.02	.03	.32	.65	-.86	.01	.73
b_{47}	.16	-.02	.03	.86	.01	-.42	.02	.01
b_{57}	-.18	.44	.36	.88	.73	.59	.66	.72
b_{67}	.58	.21	-.22	-.24	-.50	.01	-.12	-.57

* The first column lists the dependence coefficients using the composite variable CONFLI.

** Coefficients b_{13}, b_{23}, b_{14}, b_{24}, b_{34}, b_{15}, b_{35}, b_{45} remain the same because they are not affected by a change in the value of the lower predictors.

V51 Number of demonstrations
V52 Days of rioting
V53 Number of declared emergencies
V54 Years of civil wars
V55 Arrests per million
V56 Log killed per million
V57 Number of recorded instability events

TABLE XLVII

COMPARISON OF THE CORRELATION, REGRESSION AND DEPENDENCE COEFFICIENTS OF THE BASIC INDEPENDENT VARIABLES AND THE DEPENDENT VARIABLE

Basic Variables	Correlation Coefficient	Regression Coefficient	Dependence Coefficient
The Level of Economic Development			
V1 Money deposits, 1963	.09	.04	.03
V2 Paper money in circulation, 1963	-.31	.04	.34
V6 GDP per capita, 1958	-.05	.06	-.33
V12 Percentage in agriculture, 1958	-.37	-.77	-.29
V18 Energy consumption, 1963	.23	-.07	-.14
V19 Energy consumption, 1966	.14	-.09	.26
V20 Percentage of wage earners 1963	.10	.04	.03
V26 Trade as % of GNP, 1960	-.24	.02	.07
V28 Inhabitants per doctor	.11	-.01	.18
The Level of Social Mobilization			
V30 % of population in cities, 1965	.17	.08	-.52
V31 Radios per capita, 1965	-.19	-.15	-.05
V32 Telephones per capita, 1968	-.13	.12	.05
V33 Commercial vehicules per capita, 1966	-.28	-.26	.00
V34 Automobiles per capita, 1966	-.32	-.04	.16
V35 Secondary school enrollment, 1962	.03	.21	.04
V36 Secondary school enrollment, 1966	.12	.06	-.27
V37 % in post-secondary schools, 1961	.07	.25	-.24
The Level of Political Participation			
V38 Votes for ruling party before independence	-.54	-.25	-.51
V39 Number of elections	.16	1.18	.93
V40 Electoral turnout	-.11	-.04	.72
V41 Votes for ruling party after independence	-.30	-.08	.05
The Level of Party Institutionalization			
V42 Parties with legislative representation	.36	.56	-.12
V43 Parties not banned	.41	.97	-.11
V44 Number of splits	.14	-.61	-.12
V45 Legislative fractionalization	.33	.02	-.15

TABLE XLVII (Cont.)

Basic Variables	Correlation Coefficient	Regression Coefficient	Dependence Coefficient
The Level of Government Penetration			
V46 Government revenues to GNP, 1966	-.02	.33	-.35
V47 Growth of government spendings to GNP, 1963/65	.02	.10	-.01
V48 Growth of government revenues, 1963/65	-.12	-.03	.06
V49 Government spendings, 1966	-.14	-.06	-.01
V50 Growth of government spendings to GNP, 1963/68	-.18	-.11	-.23
The Level of Internal Conflict			
V51 Number of demonstrations	.41	.66	.29
V52 Days of rioting	.41	.21	-.01
V53 Number of emergencies	.58	3.35	.27
V54 Years of civil wars	.45	-1.27	.31
V55 Arrests per million	.28	-.01	.24
V56 Deaths per million	.30	-1.22	.65
V57 Number of instability incidents	.59	1.53	.30

Source: Tables XXXI, XL, XLI, XLII, XLIII, XLIV and XLV.

B27 and B28 is not a statistical artifact resulting from the aggregating process. Even when the different basic indicators of the socio-economic and political processes are used instead of the aggregated variables (ECONOC, MOBILI, PARTIC, INSTIT and PENETR) the causal predominance of internal conflict is maintained.

On the other hand when the composite variable CONFLI is replaced by the seven basic variables of internal conflict, a wider spread in the strength and direction of the final causal link (b_{67}) is evident (Table XLVI). In fact, no coefficient comes close to the value of .58 arrived at when using CONFLI as a predictor. Also, the size of the causal impact of every basic variable is lower than .58 (with one coefficient as low as .01) and in five out of seven instances the sign is a negative one. Not only does this indicate the sensitivity of dependence analysis to the data used, but also the danger of using single indicators as causal predictors. In this case, the basic variables taken individually are more negatively and weakly related to the level of military intervention in politics than the composite variable CONFLI indicates. This fact alone lends credence to the hypothesis suggested earlier that there is an escalation and cumulative dimension in the phenomenon of internal conflict.[22] Taken alone, the number of instability events (V57), years of civil war (V54) or national emergencies (V53) can be considered as inhibiting factors in the rise of militarism. Taken together their causal contribution becomes positive.

However, Table XLVIII reveals more than this cumulative effect. It was suggested above that CONFLI was acting as a funnel through which the causal influence of the other composite variables, particularly political participation and party institutionalization were channelled. A look at the b_{16} to b_{56} dependence coefficients in Table XLV partially confirms this hypothesis. For example, all the b_{36} and b_{46} coefficients (for political participation and party institutionalization) differ markedly from the coefficients of -.35 and .40 arrived at by using CONFLI as the predicted variable. Therefore these two coefficients are particularly sensitive to the variable used as an indicator of internal conflict. Similarly, the fact that 20 out of 21 of the b_{16}, b_{26} and b_{56} coefficients have different signs than the coefficients arrived at by using the composite variable CONFLI confirms the sensitivity of this data. More immediate confirmation of this fact is available from an examination of the indirect effects of the predictor variables through the different versions of the internal conflict measure (Table XLVIII). On the whole, the indirect effects appear less sensitive to which measure of internal conflict is used than the direct effects. The fact that no matter which basic variable is used as an indicator of the level of internal conflict, the latter still seems to have this important channelling effect both for political participation and party institutionalization is even more interesting (see boxed-in area in

TABLE XLVIII

INDIRECT EFFECT OF THE COMPOSITE VARIABLES THROUGH THE LEVEL OF INTERNAL CONFLICT AS MEASURED BY ITS BASIC INDICATORS INSTEAD OF THE COMPOSITE VARIABLES*

Composite Variable	V51	V52	V53	V54	V55	V56	V57
ECONOC (-.09)**	.02	.02	-.05	.06	.00	.01	.08
MOBILI (.01)	.02	.00	-.01	.13	.00	.02	.15
PARTIC (-.34)	-.11	.07	-.13	-.25	.00	-.05	-.29
INSTIT (.34)	-.08	.08	-.16	-.22	.00	-.05	-.23
PENETR (.01)	.00	.01	-.01	.04	.00	.00	.01

* The first line of the Table reads as follows: the indirect effect of economic development on military participation through number of demonstration (V51), number of riot days (V52), number of national emergencies (V53), number of years of civil war (54), number of political arrests (V55), number killed (V56) and total number of instability events (V57).

** The total indirect effect as derived by using the composite variable of internal conflict (CONFLI) as the intermediate variable.

Table XLVIII. These two composite variables exhibit higher coefficients of indirect effect through the various basic variables than any of the other composite variables.

Thus dependence analysis carried out with the basic rather than the composite variables confirms the strength, direction and nature of the causal impact of the level of internal conflict on the level of military involvement in the African political process (b_{14} and b_{15}). It also confirms the assumption that this variable acts as a funnel, channelling the causal influences of other composite variables. Also, these additional dependence analyses reveal that the funnel effect is particularly strong for political participation and party institutionalization and that internal conflict, as a composite causal variable, has a cumulative and escalatory dimension not previously evident.

These more detailed dependence analyses also enable us to verify the hypothesis, first suggested in Chapter V, that industrialization and urbanization, and to a lesser extent education, have a different causal impact on the level of military intervention than the aggregated variables for the level of economic development and social mobilization.

An examination of the b_{17} coefficients in Table XLI is not entirely conclusive in the case of industrialization. While V12 (percentage in subsistence agriculture) has a definite negative (-.29) impact on the

level of military involvement, the impact of V20 (percent of wage earners) is non-existent (01), thus hypothesis B3 is only partially verified. In the case of urbanization (V30), the evidence in Table XLII is more striking. The dependence coefficient (b_{27}) when V30 is used reaches .74 compared to .05 in the case of the composite variable MOBILI. Clearly, urbanization has a strong causal impact on militarism to which it contributes positively, a fact which was suggested by bivariate analysis (B10). The evidence for the impact of education is contradictory. One indicator (V35: secondary school population in 1962) has a negative causal impact while the same indicator taken four years later (V36) has a positive impact. Thus, on the basis of the dependence analysis, it is not possible to confirm hypothesis B11. This discrepancy can be seen as an indication that it is necessary to give more attention to the time dimension.

Dependence analysis initially suggested that the overall process of economic development had a negative causal impact on the level of military involvement (B2). Is this finding confirmed by further dependence analysis? An examination of the b_{17} row in Table XLI reveals that only four basic variables have a negative coefficient while five others have one positive. However, the fact that the negative coefficients are at a high level gives some plausibility to the overall negative coefficient (-.10) between ECONOC and the level of

FIGURE 11

DEPENDENCE ANALYSIS WITH V18 REPLACING ECONOC

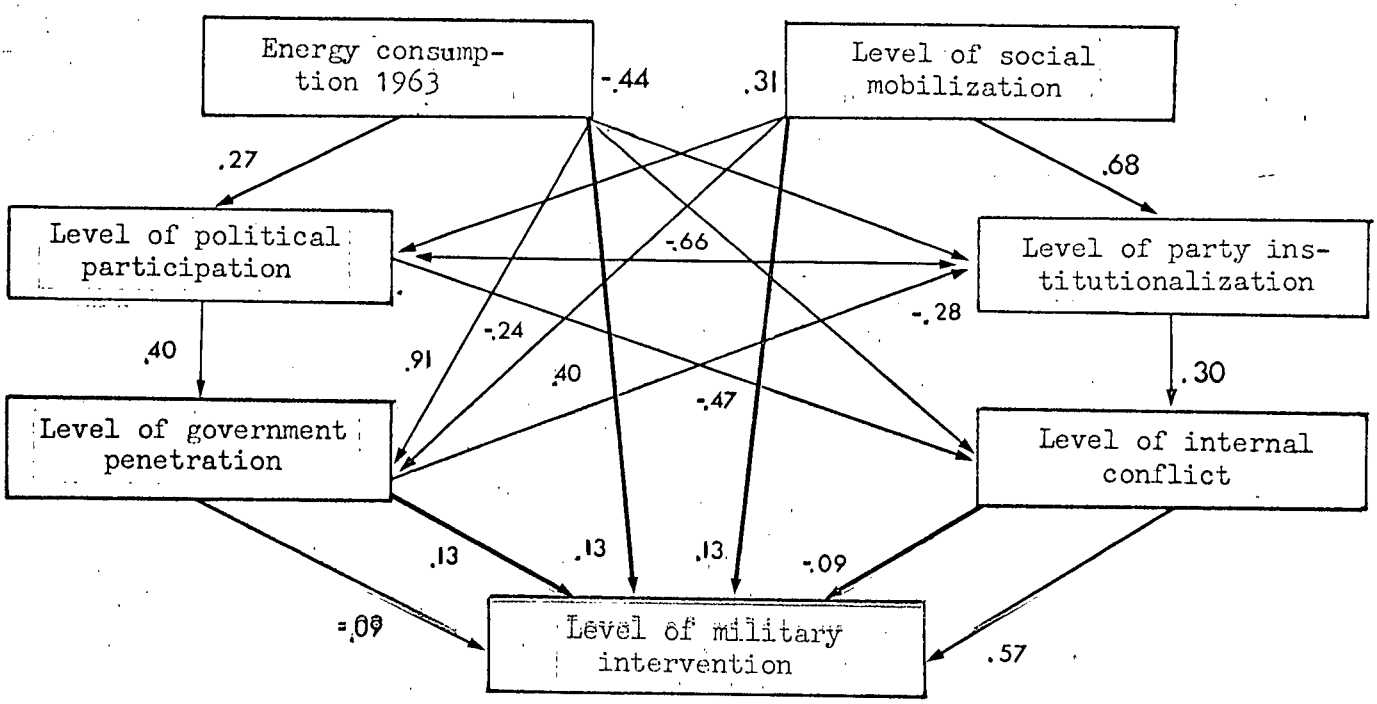
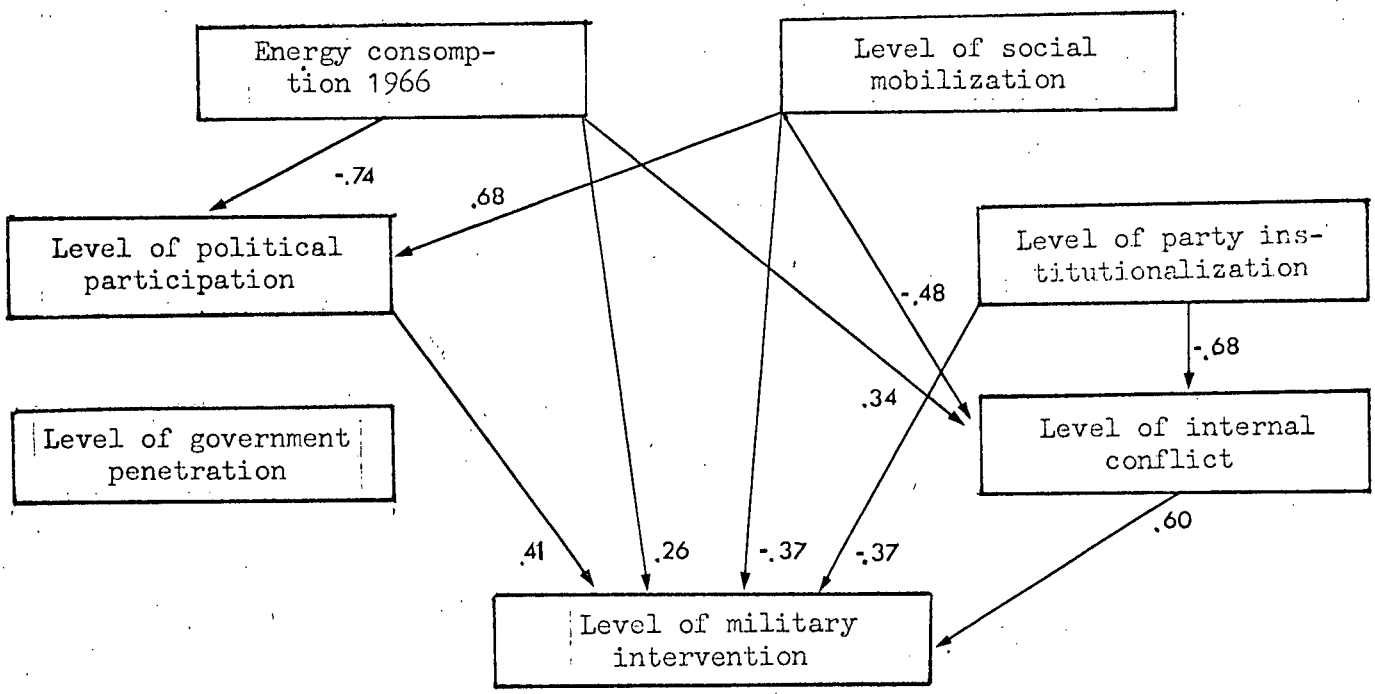


FIGURE 12

DEPENDENCE ANALYSIS WITH V19 REPLACING ECONOC



military intervention. Can the discrepancies between the dependence coefficients of the basic variables and that of ECONOC be explained? For example, short of measurement error, the causal pattern of V18 and V19 (energy consumption in 1963 and 1966) could be expected to be roughly equivalent, but they are not, one is positive and the other negative. Further investigation seemed necessary because of the time dimension involved in the discrepancy. Figures 11 and 12 illustrate the major causal relationships existing in the two models, one using V15 as its indicator for economic development, and the other using V19.

The post-1965 model has fewer causal arrows and thus greater simplicity than the pre-1965 one (10 versus 18 arrows). Also, the strength of the various causal links in the post-1965 model has increased, making for a more determined model. Third, all causal links (except for government penetration) between the independent variables and military involvement are higher in the post-1965 model. However, internal conflict is still the strongest influence and remains in the vicinity of .58. Finally, economic development,(as measured by V19) and social mobilization have a direct causal impact on the level of military intervention in the post-1965 model.

Looking at the internal dynamics of the models, the post-1965 model shows that the level of economic development has a definite positive influence (.34) on internal conflict, while in 1963 it served

to inhibit (-.28) such conflict. Also, there is no longer any significant link between V19 and government penetration, which in the pre-1965 model served to inhibit military involvement. Thus, except through its negative impact on the level of political participation, economic development has moved from having a negative to a positive impact on the level of military intervention. Possibly the economic development which took place between 1963 and 1966 became an unstabilizing force in the African environment. However, during the same period social mobilization moved in the opposite direction, from a positive to a negative impact on military intervention.

Turning to the three political variables and remembering that initial dependence analysis revealed a positive impact for political participation and party institutionalization but a negative one for government penetration, the causal links for each of the basic variables should be examined. An examination of the b_{37} coefficient in Table XLII confirms the positive link between political participation and the level of military intervention. However, the dependence coefficients using percentage of votes cast for the ruling party in the last election before independence (V38) as a predictor, instead of PARTIC are highly negative. This result can be interpreted as meaning that the extent to which a political party was firmly entrenched before the transfer of power took place will inhibit the

rise of military intervention in the political process. If the dependence coefficients of the basic variables are compared with their equivalent correlation and regression coefficients, the positive link between the number of elections (V39) and the level of military intervention suggested earlier is reconfirmed but the hypothesized positive link between electoral turnout and military intervention is now reversed.

The causal pattern for the basic variables of party institutionalization is more difficult to interpret. The dependence coefficient of INSTIT, the composite variable, is positive at the .16 level, while the coefficients involving the four basic variables are all negative and at a lower level (Table XLIV: b_{47}). This is a complete reversal from the results of the correlation and regression analyses. As in the case of internal conflict, this reversal suggests an interactive process at work among the basic variables. Taken individually the basic variables make an insignificant causal impact on military intervention; when aggregated, the strength of the impact is increased and its direction changed.

One apparent pattern of causation emerges from the variables of government penetration (Table XLV). The three basic variables which are linked to the country's G.N.P. (V46, V47 and V50) have a different causal impact on military intervention than the

other two variables whose influence is more comparable to that originating from PENETR. Thus the overall level of government penetration inhibits military intervention, but if government penetration is measured against the economic performance of the country, it contributes positively to military intervention. No plausible explanation for this discrepancy is apparent at this time.

Table XLIX lists the 30 major findings of the dependence analysis and their status vis-à-vis the findings of the bivariate and regression analyses carried out earlier. In 53 per cent of the cases (16 out of 30), dependence analysis has confirmed the findings of the bivariate and regression analyses. In 26 per cent of the cases it completely reversed the trend suggested earlier, while in 21 per cent of the cases it modified substantially part of the early hypotheses.

In summary, we can say that dependence analysis has enabled us to identify and measure the strength of the six independent variables in explaining the level of military intervention existing in the states of Tropical Africa. As hypothesized in Chapter IV, a high level of economic development and a high level of government penetration were found to decrease the probability of repeated military interventions while a high level of social mobilization and internal conflict were

TABLE XLIX

SUMMARY OF THE MAJOR FINDINGS OF THE DEPENDENCE ANALYSIS

Findings	Depencence Coefficient	Strength of Association*	Direction of Association	Comments
Overall level of economic development	ECONOC= -.10	low (B1)	negative (B2)	Confirms the findings of the bivariate (b.a.) and the regression (r.a.) analysis
Level of industrialization	V12= -.29 V20= .01	low (B3)	positive (B3)	Confirms the findings of the b.a. and the r.a.
Level of economic welfare	V28= .18	low (B4)	positive (B4)	Confirms the findings of the b.a. and the r.a.
Level of economic output	V6= -.33 V18= -.14 V19= .26	low (B5)	ambivalent (B5)	After 1965 there is a positive association between the level of economic output and the level of intervention
Level of economic input	V1= .03 V2= -.48	ambivalent (B6)	ambivalent (B6)	Opposite impact of the level of money deposits and the paper money in circulation
Level of economic autonomy	V26= .07	low (B7)	positive (B7)	Confirms the findings of the r.a. as the direction of the impact
Overall level of social mobilization	MOBILI= .05	low (B8)	positive (B9)	Existence of a positive impact was not detected by the b.a. and r.a.
Level of urbanization	V30= .74	high (B10)	positive (B10)	The impact of urbanization is much higher than predicted by b.a. and r.a.

TABLE XLIX (Cont.)

Findings	Dependence Coefficient	Strength of Association*	Direction of Association	Comments
Level of education	V35= -.20 V36= .29 V37= .23	low (B11)	ambivalent (B11)	Higher education and the 1966 level of secondary enrollment have a positive impact on the level of military intervention
Level of social communication	V31= -.02 V32= -.06	low (B12)	negative (B12)	Confirms the findings of the b.a.
Level of physical communication	V33= -.30 V34= -.08	low (B13)	negative (B13)	Confirms the findings of the r.a.
Overall level of political participation	PARTIC= .19	low (B14)	positive (B15)	The impact of PARTIC is now positive rather than negative as suggested by the b.a. and r.a.
Number of elections	V39= .93	high (B16)	positive (B16)	Very high causal impact of V39 on the level of military intervention
Level of voter turnout	V40= .72	high (B17)	positive (B17)	The strength and direction of the causal impact is completely reversed from b.a. and r.a.
Level of voter support for dominant party	V38= -.51 V41= .05	ambivalent (B18)	ambivalent (B18)	Existence of a different impact by the voters support before independence and voter support after independence
Overall level of party institutionalyzation	INSTIT= .16	low (B19)	positive (B20)	The impact of INSTIT is not as strong as suggested by the b.a. and r.a. but in the same direction

TABLE XLIX (Cont.)

Findings	Dependence Coefficient	Strength of Association*	Direction of Association	Comments
Level of party representation	V42= -.02 V43= -.03 V45= -.01	low (B21)	negative (B21)	The impact is now a negative one but of the same low strength as in b.a. and r.a.
Level of party division	V44= -.06	low (B27)	negative (B22)	Confirms the findings of the r.a.
Overall level of the government penetration	PENETR= -.18	low (B23)	negative (B24)	Confirms the findings of the b.a.
Growth of expenditures and spendings to GNP	V47= .73 V50= .14	moderate (B25)	positive (B25)	The impact is clearly positive and at a moderate level
Level of expenditures and revenues per capita	V46= .46 V48= -.21 V49= -.29	low (B26)	ambivalent (B26)	Confirms the findings of the r.a.
Overall level of internal conflict	CONFLI= .58	high (B27)	positive (B28)	Confirms the findings of the b.a. and r.a.
Small-scale incidents	V51= .21 V52= -.22 V53= -.24 V55= .01 V57= -.57	low (B29)	ambivalent (B29)	No apparent pattern as to the direction of the causal impact on the level of military intervention
Incidents of mass violence	V54= -.50 V56= -.12	moderate (B30)	negative (B30)	Confirms the findings of the r.a.

* The strength of the dependence coefficient was assessed in the following way:

$|0 \leq d < .30|$ = low association
$|.30 \leq d < .50|$ = moderate association
$|.50 \leq d|$ = high association

found to increase this probability. On the other hand, the results of the dependence analysis did not confirm the negative causal link between the level of party institutionalization and political participation and the level of military intervention. In Chapter VII an attempt will be made to provide some conceptual coherence to these findings by examining the role of political parties and the importance of social conflicts in recent African politics.

NOTES AND REFERENCES TO CHAPTER VI

1. Wright (1934, 1951, 1954, 1960) is undoubtedly the father of causal modelling. See also Li (1956), Moran (1961) and Turner and Stevens (1959) for use of the path coefficients in genetics. Economists of course have had a long tradition of working with standardized b coefficients, see Wold and Tureen (1953) and Malinvaud (1964). Campbell and Stanley (1966) have also described causal modelling within the framework of experimental research. See also Werts (1968) for a more sociological view of path analysis.

2. For applications of causal modelling in sociological literature, see the excellent article by Hodge and Trieman (1968). These contributions are especially interesting for the distinction they make between direct and indirect effects.

3. For applications of causal modelling to political science, see Choucri (1969), McCrone and Cnudde (1967), Cnudde and McCrone (1966), Goldberg (1966), Miller and Stokes (1963) and Mathews and Prothro (1966). Alker (1965) also provides a good introduction to the use of causal analysis with political science data.

4. Carlos (1970) clarifies the conceptual unity of these variations.

5. These assumptions and the consequences of their violations are discussed in the next section.

6. The letter was dropped and replaced by the appropriate X's since there is no longer a single dependent variable but seven different variables.

7. Blalock (1961,1962, 1964, 1968) has described extensively the procedures and logic of the approach. Until now the Simon-Blalock technique has been almost the only method used by political scientists concerned with causal modelling. See Tanter (1967) and Smith (1969) for two other excellent applications.

8. In other more technical words, the researcher can make use of the fact that the regression coefficients of a particular variable is necessarily equal to zero when those variables preceding it in the causal tree have been partialled out (that is, controlled for). Evidently when the regression

8. (cont'd) coefficient is equal (or set to) zero the corresponding partial correlation of that variable will also be zero. Since in a set of structured equations the error terms (e's), constant terms (C's) as well as the a's are unknown, and since there must be fewer unknowns than equations, additional restrictions must be made. The constant terms are simply eliminated by assuming that each variable has been measured in terms of deviations about the mean. Also, by assuming that the residual variables are uncorrelated they can also be eliminated so that there will be exactly the same number of equations as unknowns. For each a that we make equal to zero, an additional equation will be generated. Only when the new model arrived at is conformed to the empirical reality will these predictive equations be consistent with one another.

9. See also Boudon (1967b, 1968). Recently a number of articles have appeared almost all by French social scientists and built on certain aspects of dependence analysis (Flavigny, 1969; Chapoulie, 1969; Bassoul, 1967; Degenne, 1967; Feldman, 1969). These articles complement the original work by Boudon by expanding on some of the steps covered by Boudon.

10. These dependence coefficients measure the fraction of the standard deviation of the dependent variable for which the independent variable is directly responsible (that is, when all other variables, including the residual variables, are held constant).

11. This results only if sampling and measurement error are ignored.

12. On the problem of linearity in regression and causal analysis, see Simon (1957), Williams (1968), Creager and Valentine (1962). Blalock (1965b, 1969) considers non-linear and non-additive causal models also.

13. On the problem of causal analysis with transformed variables see Blalock (1967a).

14. These graphic distributions are not reported in this study.

15. Blalock (1967a, 1969) considers this problem extensively. Coleman (1964a, 1964b, 1968), although not directly concerned with causal analysis, also suggests elaborate procedures to take into account change in causal thinking. The respective value of recursive versus non-recursive systems is discussed by Strotz and Wold (1960).

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CHAPTER VII

INTERPRETATION OF THE EMPIRICAL RESULTS

In Chapter III it was seen that the immediate causes of the military's decision to intervene in politics rested with the organizational and institutional characteristics of African armies and with the changing nature of the exchange process between the military and its environment. Nevertheless, this post-facto historical and organizational reconstruction of the process did not explain why certain African military organizations have repeatedly intervened in the political process while others, although they may be confronted with similar threats to their organizational integrity, have not intervened. The wide distribution of military coups across the African continent led to the conclusion that it would be possible to identify a set of political and socio-economic parameters which, without actually causing military coups, might help explain why this phenomenon takes place in certain cases and not in others. These parameters may be said to constitute a set of conditions favourable to the implementation of the military's decision to intervene. The major objective of the empirical analysis which followed was to complement the findings of the historical and organizational analysis of the process of military intervention.

As a first step six factors were identified in the economic, social and political environment of African societies which could help explain,

from a systemic point of view, the high level of military intervention in African countries. Four factors - economic development, government penetration, party institutionalization and political participation - were hypothesized to decrease the level of military intervention while it was suggested that a high level of social mobilization and internal conflict would increase the probability of such an intervention. Among the many findings which emerged from the attempts to verify these six hypotheses, five stand out as particularly important and in need of additional theoretical attention:

1 The important and positive causal impact of the level of internal conflict (as measured by its composite variable and its basic indicators) in determining the level of military intervention. Not only is the level of internal conflict the most important single predictor of military intervention but this variable also acts as a funnel through which the indirect effect the other independent variables is channelled.

2 The positive causal contribution made by the level of political participation and the level of party institutionalization on the level of military intervention. This finding would seem to suggest that in Africa institutionalization of a party system and a high level of participation in national politics serve to enhance the probability of military intervention.

3 The central position held by two of the political variables (party institutionalization and political participation) in explaining the dynamics of the causal model. Apparently these variables act as links between the socio-economic variables and the conflict and military intervention variables.

4 The absence of any significant direct impact of the level of economic development and the level of social mobilization on the probability of military intervention. The causal impact of these variables is exerted in an indirect way, mainly through the party institutionalization and political participation variables.

5 The importance of the time element in explaining the different causal patterns followed by the various basic indicators. In many instances those indicators of a pre-1965 situation have a different causal impact on the dependent variable than the post-1965 indicators.

Taken together, these hypotheses suggest that in Tropical Africa the probability that any given country will exhibit a high level of military intervention has little to do with the performance of and the demands put on the economic and social systems. Instead military intervention is more directly the result of the existence of the innumerable conflicts which divide African societies. These conflicts which pitch tribe against tribe, class against class, social group against social group find their origin in the socio-economic divisions which already existed prior to independence, but which are given a more political aspect as a result of the existence of an institutionalized party system and a high level of popular participation in electoral politics. Thus in Tropical Africa political life, at least as it is demonstrated in political parties and electoral practices, tends to increase rather than inhibit social conflict and a high level of military intervention. The existence of a well-developed party system only serves to intensify the social tensions caused by the process of economic development and social mobilization by providing leaders, ideological platforms and instruments where tensions can reveal themselves and expand.

Clearly the existence of a positive link between party institutionalization and internal conflict on the one part and between political participation, political institutionalization and military intervention on the other, stands out as the most interesting finding of this empirical

exercise since it contradicts two of the most widely accepted hypotheses in the field of political development and African politics. For example, Alexander (1958), Ozbudun (1966) and Lissak (1969) all argue that well-developed political institutions, especially political parties, are the best deterrent against military coups. Similarly Almond (1963), Black (1966), Johnson (1962), Finer (1962) and Hopkins (1969) suggest the same hypothesis with regard to a high level of political participation. Perlmutter (1969) also argues that a low level of party institutionalization prevents the recruitment and mobilization of those human resources necessary to fulfill the rising expectations of individuals while Huntington (1968) expresses absolute faith in the necessity of political parties for a dynamic and balanced process of political development. For him a state without parties is a state "without the institutional means of generating sustained change and of absorbing the impact of such change (1968, p. 104)". As a result the ability of this state to modernize politically, economically or socially is drastically limited. In fact the continuation of the modernization process is said to depend to a large extent on the relationship between political participation and party institutionalization. Without effective political institutions a high level of political participation will act as a de-stabilizing force. Without mass participation political institutions will lack flexibility and the capacity to innovate. In the end Huntington concludes that political parties are so important that "the susceptibility

of a political system to military intervention varies inversely with the strength of its political parties . . . and that "violence, rioting, and other forms of political instability are more likely to occur in political systems without strong parties than in systems with them (1968, p. 409)".

The empirical analysis carried out in Chapters V and VI supports precisely the contrary view. The data show that the level of military intervention is directly proportional and not inversely proportional to the strength of political parties (.16) and that "violence, rioting and other forms of political instability" are more likely to occur in political systems with strong parties (.40) than in a system with a weakly institutionalized party system. The discrepancy between these empirical findings and the current development theory suggests that, at least in the case of Tropical Africa, some of the well-established dogmas of political development theory need revision, especially with regard to the role of political parties and their impact on social conflicts.

Political Parties and Conflicts during the Struggle for Independence

Political parties did not emerge in Tropical Africa under the same set of circumstances as they did in Western democracies. They were not created as a result of parliamentary alliances. Nor did they stem from the desire of some social groups to acquire parliamentary representation.

Ignorance of this fact has been the source of considerable misunderstanding as to the role of parties and party institutionalization in the African development process. This ignorance has led to the belief that in Tropical Africa the persistence of social and political conflicts and the increase in military intervention is partly due to failures in organization and leadership, on the part of political parties. Many authors, notably Skurnik (1970), Welch (1967) and Said (1968) argue that before independence African parties were successful in uniting and articulating divergent social interests but that after independence they lost some of this ability. This interpretation is based in part on a romantic vision of the African struggle for independence.

Independence is often thought to have been achieved because of the effectiveness of African political parties in creating and mobilizing popular support so as to threaten the colonial authorities with the possibility of mass rebellion if independence was not granted. Morgenthau (1968), Hodgkin (1961) and Wallerstein (1961), attribute the success of the nationalist parties to their articulate leadership, their high sense of discipline, their effective use of their organizations as a weapon and the direct participation of their members. Wallerstein, writing in 1961, states that "most African nations came to independence by organizing a nationalist movement which laid effective claim to power (1961, p. 95)". According to Liebenow (1965) the political party was the only modern

structure which was African entirely. It was the only structure with which the modernized elite, the peasant cultivators and the urban proletariat could all identify. As a result political parties had an advantage over all other structures:

> Political parties had distinct advantages over traditional associations which were based upon the possession of an ascribed characteristic; over religious associations, which not only required one's acceptance of a fairly elaborate system of belief but also one's renunciation of previously accepted doctrine; and over trade-unions, cooperative societies and veterans' groups, which usually required some minimum skill or experience (Liebenow 1965, p. 50).

The predominant role played by political parties in the struggle for independence is usually traced to three factors: their organizational strength, the quality of their leadership and their capacity to transcend regional and ethnic divisions. For example, in his study of the Union Progressiste Sénégalaise, Foltz (1964) insists that the pyramidical structure of the U.P.S. and its ability to attract the support of both the newly enfranchised rural voters and the young left-wing intellectuals were the keys to its success. In Mali, the success of the Union Soudanaise has been attributed to the collective nature of its leadership and to the effectiveness of its internal network of communication (Hodgkin and Morgenthau, 1964). In Guinea and Ghana, the successes of the Parti Démocratique de Guinée and the Convention People's Party have been attributed to a large extent to the charismatic qualities of their leaders as well as to their talent

as political brokers (Du Bois, 1964; Apter, 1963, 1964). Finally, the victory of African nationalist parties has been credited to their capacity to transcend internal divisions by providing a structure "that cut across ethnic, regional, religious, sex, and generational lines (Liebenow, 1965, p. 50)". This unity was achieved by the careful use by political leaders of "the implicit promise that the tension resulting from and antagonism, from the restraints of the colonial rules and from the discipline of the nationalist organization would be temporary (Wallerstein, 1961, p. 86)".

A majority of these early studies explain the post-independence difficulties of African governments by examining the failure of the nationalist parties to adapt to the changing conditions created by independence. For example, Welch writes: "The tactics and organization of parties appropriate for anti-colonial activities were not necessarily appropriate for the tasks of governance after independence (Welch, 1970, p, 18)". The causes of this lack of structural adaptation are numerous: conflicts between politicians, the disappearance of the colonial enemy which had acted as unifying force, the lack of attention paid by the political leaders to their party organizations, the increasing demands made by the population and the anti-authoritarian sentiment widespread among the population as a result of the anti-colonial struggle. Whatever the reasons, it is agreed that after independence the structural qualities of political parties disappeared as "the arteries of communication hardened [and] the shriveling party structure became simply a transmission

mechanism for directives and official exhortation (Young, 1970, p. 462)". In short, political parties and their leaders could no longer fulfill their role of aggregating and articulating local interests, socializing individuals to political life and integrating them within the new national political unit system. The changes in the forms and goals of political action which were introduced following independence proved to be too drastic for the pre-independence parties to withstand:

> The shift from vilification and agitation against government to its support and defense, the shift from mobilization and maximization of grievances to their containment, sublimation, or projection onto someone's internal or external enemy; the shift from the stimulation of exaggerated hopes to the inculcation of duty, sacrifice, and postponed reward (Coleman and Rosberg, 1964, p. 673).

Since Zolberg's works appeared (1966, 1969), this vision of the African road to independence can no longer be sustained. African parties never constituted a powerful political machine capable of transcending ethnic and regional differences. The nationalist parties depended for their strength on the colonial authorities recognition of them as valid spokesmen for the African majority. They also depended on the particular conditions prior to independence where "even a slight structural increment could bring very great marginal returns (Zolberg, 1966, p. 17)"

The decision of African nationalist leaders to reach independence through the means of political parties was a strategic one, based on a political assessment of colonist-colonized <u>rapport de</u>

forces It was not the result of any belief as to the moral superiority of peaceful electoral change over revolutionary violence. Nor did they have any vision of the importance of political parties in an overall process of political development. Their objective was to win electoral power, not to score a moral victory by demonstrating their respect for the ways of western democracy. The entrenchment of the colonial bureaucracies made it unlikely that Africans could hope to dislodge the Europeans by working through the bureaucratic system. The replacement of a colonial "bureaucratic mandarinate (Young, 1970, p. 454)" which had exclusive access to the sources of political power, social status and economic wealth, called for the seizure of political power.[1] Yet the nationalist leaders could not realistically hope to achieve victory through the use of violence and guerilla warfare, nor did political conditions of the 1945-55 period call for such drastic measures.[2] To some extent African nationalist leaders had no choice but to make use of political parties as the primary instrument in their struggle for independence.

To some extent the nationalist decision to fight the bureaucratic mandarinate through the ballot box was also forced upon them by the colonialists' vision of how decolonization should be achieved and by their military capacity to impose their will. According to colonial authorities, decolonization was to be a peaceful, gradual and constitutional process which would allow them to withdraw with honour and with

certain guarantees as to their defence and commercial interests. By linking constitutional advancement to the fluctuations of electoral competitions, the colonial authorities hoped to be able to control and even slow down progress toward independence. To achieve this objective they made full use of their role as constitutional referees and their position of political predominance.

The colonial authorities benefitted from the fact that the African political parties were not entirely free to operate as they wished since they were closely associated, at least in the French-controlled territories, with metropolitan parties which, on the whole, restrained their enthusiasm for independence. Also the colonial authorities had the sole responsibility for the establishment of electoral laws and procedures and thus could define the conditions under which the electoral competition would take place. In the French territories, universal franchise was only granted with the Loi Cadre of 1956. In Nigeria, universal franchise (except for women in Northern Nigeria) was achieved only months before independence. Finally, the colonial authorities, because of their control over the political and economic ressources, could offer administrative, legal or financial support to some groups and not to others.

Therefore African nationalist leaders clearly had no other choice than to use the electoral road to independence. According to Bénot:

> Il n'y avait pas le choix: faiblesse ou inexistence du prolétariat proprement dit, prédominance d'une masse paysanne durement exploitée, maintenue dans le cadre des structures anciennes à l'intérieur d'un régime tout différent, difficultés de communication avec le monde et entre soi, barrages multipliés interdisant l'accès à la culture (Bénot, 1969, p. 17).

Mass revolt against colonial oppression followed by a social revolution was not likely to succeed. The ballot box offered a more realistic promise. Also the concern of African nationalist leaders for the immediate attainment of independence and the construction of new African political systems should not be exaggerated. In the case of French-controlled Africa "the word 'independence' was for long excluded from the public vocabulary of French-speaking African politicians, and the demand for independence was not formally made by any major political party until well over a year after Ghana had become a sovereign state (Crowder, 1965, p. 15)". Until then, French African nationalist leaders were more "concerned not with the achievement of local self-government but with squeezing as much juice as possible out of the assimilationist lemon (Crowder, 1965, p. 19)". Political parties were not seen as instruments for achieving independence but as a means of securing the abolition of the corvée and gaining civil liberties by working closely with the French metropolitan parties. Even when independence became recognized as the major objective of the African nationalist movement it was assumed that African political parties could not obtain it on the basis of their own efforts but would first have to work

toward the establishment of a left-wing government in France.

In the British controlled territories, particularly in Ghana, there was an earlier recognition of the primacy of the objective of independence. However, since Britain officially acknowledged, even if only ambiguously, that it had no plans for assimilating its African territories, independence was not seen by African leaders as a distant and difficult objective. As a result political parties were not consciously organized for the sole aim of obtaining independence. Political parties constituted one way for Africans to exercise power and to gain increasing control over the different instruments of state power. For many nationalist leaders electoral politics were seen only as an activity, not as the road to salvation.

Even in the case of Guinea, Sekou Touré later recognized the fact that only a minority of the leaders of the P.D.G. were conscious of the link between electoral politics and national independence:

> Seule une minorité d'éléments conscients et instruits des lois du développement des sociétés savait qu'il ne serait jamais possible à nos peuples de réaliser leurs profondes aspirations à une vie de dignité tant qu'ils n'auraient pas reconquis l'attribut essentiel de la dignité qui est l'indépendance nationale (Touré, 1967, p. 46).

Until 1958, Touré admits, no one had any idea how the accession to national independence would take place. It took the return of De Gaulle to convince Sekou Touré and others that independence could be achieved through a unilateral decision of African nationalist leaders.

This very pragmatic view of the role of political parties meant that nationalist leaders did not really distinguish between the goal of independence and their desire to maintain themselves in office so as to share the economic and social spoils that go with even the limited exercise of political power. In their attempts to arrive at a unified nationalist front, leaders like Senghor in Senegal, Houphouet-Boigny in the Ivory Coast, Keita in Mali and NKrumah in Ghana were not only motivated by a desire to present a common front but also to eliminate adversaries who could also demand a share of the spoils either after independence or during the struggle toward independence.

As a result of this ambivalent vision, nationalist leaders did not eliminate the use of violence as a means of furthering both objectives. Nor did they hesitate to make use of ethnic and regional tensions when it served their purpose. The notion that the creation of political parties and the decision to achieve independence through the electoral process meant a rejection of violence and a sublimation of internal tensions must therefore be abandoned.

For example NKrumah of Ghana included in his definition of legitimate and non-violent political activism not only open meetings and newspaper campaigns but also strikes, boycotts and non-cooperation. In Cameroun, Madagascar and Kenya, violence was never excluded completely from the range of activities undertaken publicly or semi-publicly by the nationalist parties. According to Hodgkin (1961), nationalist leaders soon realized that isolated incidents of violence tended to

intensify the level of national consciousness among the masses while providing the movement with the martyrs and heroes it needed. Also incidents of violence often helped to secure political concessions from the colonial authorities and to provide the process of political change with an aura of irreversibility.[3] The activities of African nationalist parties usually fell somewhere between violence and non-violence, that is in the spectrum

> where extra-constitutional action, intended to be non-violent and not in fact involving violence shades off into extra-constitutional action, intended to be non-violent, but leading in practise to violent collisions, and that again into extra-constitutional action, with violence neither planned or excluded, but in fact occurring (Hodgkin, 1961, p. 129).

Violence was also used by the dominant or aspiring dominant nationalist party against other parties or against splinter groups: The tactics used by the Troupes de l'Eléphant, a strong-arm organization of Ivory Coast R.D.A., in 1956 against ethnic competitors; the attacks by supporters of the Union Démocratique de Défense des Intérêts Africains against supporters of the Mouvement Socialiste Africain which resulted in the Brazzaville riots of February, 1959; the use of violence by the National Liberation Movement and the Northern Peoples' Party against the emerging dominance of the C.P.P. over Ghanaien political life; the assassination in 1960 of Félix Moumée who had split from Cameroun's U.P.C.; and the various clashes between Luo and Kikuyu groups in Kenya during August 1962 are all examples of this trend.

In short, although Africa witnessed relatively few cases of mass violence to achieve purely political objectives (Cameroun, Kenya), the rise of political parties did not imply a total rejection of violence as a means of achieving political change. The leaders of the nationalist parties did not necessarily encourage violence but nor did it repudiate selective incidents carried out by their supporters. Thus in Africa, the creation of national political parties did not eliminate violence; at most they served as a substitute for a violence which, because of the military superiority of the colonial authorities, could not be used with any chance of success against the colonial domination.

In the struggle for independence through electoral competition numbers were critical and it soon became evident to the nationalist leaders that the key to success lay in their capacity to put together a sufficiently wide coalition to win victory at the polls. The strategy of the colonial authorities was to prevent the formation of such coalitions. In their struggle for the alliegance of the peasant masses, the nationalist leaders although they formally professed a strategy of African unity in opposition to European domination did not hesitate to make use of existing social and ethnic divisions when it served their purposes. These divisions were often the only means with which to reach the peasant masses whose capacity to think in terms of groups often stops at their tribal affiliation. Thus the requirements of the electoral struggle often forced the African nationalist parties to stress

rather than to overcome the existing social divisions.

The struggle for the allegiance of traditional leaders provides one example of this process. During the 1945-60 period the colonial authorities made extensive use of traditional leaders in order to forestall nationalist gains among the peasant masses. According to Wallerstein

> The essential doctrine of the colonial ruling elite was that the meaningful social entity remained the trive (and, by extension, the region). By upholding this traditional definition of the situation, they hoped to maintain their power by control via their clients, the chiefs (1967, p. 501).

In some cases the tactic of the nationalist leaders was to bypass the traditional leaders and appeal directly to the peasants. They pictured the African chiefs as the servants of the colonialists and exploiters of their own people, particularly in those situations where the powers of the chiefs had already been seriously undermined. In some circumstances, particularly in Nigeria, instead of attacking the traditional leaders, the nationalist leaders made a series of alliances with them in order to gain the electoral loyalty of their followers. In Guinea, the role of the tribal chiefs was successfully used by the nationalist party to gather electoral support for the 1958 referendum.[4] Similar tactics were used in Senegal, Sierra Leone and Kenya.

Ethnic divisions are a second type of cleavage which were given renewed importance as a result of the electoral struggle. In numerous cases in their attempts to undermine the unity of the independence movement the french authorities gave active support to ethnic parties.

In the Ivory Coast, the French administration encouraged the emergence of political parties which, by appealing to separate ethnic identities, challenged the predominance of Houphouet-Boigny's Parti Démocratique de la Côte d'Ivoire. By stressing the historical and cultural heritage of local groups these ethnically oriented parties were often successful in creating a sense of ethnic allegiance where it had previously barely existed. To maintain its monopoly over the struggle for independence the P.D.C.I. had to neutralize these ethnic divisions and gain the support of the ethnic leaders by giving them party responsibilities at the local level. When this policy of conciliation failed the P.D.C.I. resorted to repression as in the case of the King of the Sanwi state who in 1959 attempted unsuccessfully to secede from the Ivory Coast (Zolberg, 1969).

Occasionally the nationalist leaders made direct use of ethnic divisions by playing one ethnic group against the other or by presenting different candidates and different programs depending on the group to which they were appealing. This tactic was used in the Ivory Coast where the P.D.C.I. made sure that all the major ethnic groups were represented in the party and were promised some tangible benefits by the party program. Occasionally the P.D.C.I. would enlist popular ethnic leaders by offering them constituencies where their ethnic appeal was the strongest. Zolberg (1969) notes that although at the

upper levels the party structures forced these ethnic leaders into recognizing their role as national leaders, at the lower levels this procedure

> helped maintain ethnic ties even when economic and social change might have diminished their importance . . . where members of the P.D.C.I. might have developed non-ethnic associational ties from their occupational activities or neighborhood contacts, the party helped them avoid this altogether. The movement did not generate a new kind of social life. Elsewhere, basic party units coincided with ethnic wards, and party lige also reinforced ethnicity (1969, p. 143).

In Sierra Leone, the Sierra Leone People's Party achieved a position of political monopoly by appealing directly to the anti-Creole sentiment prevalent in the indigenous tribes and by claiming that a vote for any party but the S.L.P.P. was a vote for Creole domination (Kilson, 1964). In Zanzibar, the Zanzibar Nationalist Party gained control by appealing at the same time to the Shirazi sense of separateness from the Arab and African populations and to Arab religious nationalism by presenting itself as the sole defendor of Islam against the Shirazi and African intrusions (Lofchie, 1964). In the case of the British colonies, Mazrui (1966) explains this confusing use of ethnic and regional rivalries by examining the intellectual origins of the nationalist leaders. Educated in the spirit of British liberalism they were not concerned with issues such as self-determination, or the collective spirit or the nation but were more interested in questions such as individual freedom, equality before the law and civil rights. Because

these leaders found their intellectual stimulation in an ethic of individualism, they had little notion of the importance of group affiliations nor did such a notion appeal to them, except as an electoral expedient.

The requirements of electoral politics also forced African nationalist leaders to adopt an ambiguous policy toward the existing class system. Wallerstein suggests that by relying on the new middle class in their struggle against the traditional leaders, the nationalist leaders provided this group with the first elements of a class consciousness "in the sense that they realized that they had a set of economic interests, separate from that of the European ruling elite and separate from that of the African peasant masses (Wallerstein, 1967, p. 499)". In order to obtain their support, nationalist leaders opposed the economic involvement of the small African middle class with the economic and social privileges of the European expatriates. At the same time, they encouraged this group of Africans to count on inheriting the privileged position held by the Europeans. The electoral struggle also brought into the open the first signs of strain within the African population itself. In their attempts to gain the allegiance of the masses, nationalist leaders encountered passive resistance from those Africans, mostly professionals and middle or upper level civil servants, who had a considerable stake in the preservation of colonial rule since they served as intermediairies between the colonialists and the masses.

In Ghana the Convention People's Party had to struggle against an urban elite of intellectuals, teachers, lawyers and old-time politicians before gaining political control. In Guinea, Sekou Touré repeatedly complained of the apathy of professionals and intellectuals toward political activity.[5]

The situation in the Congo (K) offers the most obvious example of the increase in ethnic tensions created by the introduction of political parties and electoral politics. During the municipal elections of 1957, political parties were organized in Leopoldville and Elizabethville on strict ethnic and regional grounds. The electoral context also revived some urban ethnic associations and forced the creation of others. Meanwhile, the prospect of independence served to consolidate this ethnic nationalism. As explained by Lemarchand

> As the prospects of independence finally entered their vision certain leaders sought to consolidate their base of support through the amalgamation of tribally heterogeneous groups within the same party organization. Their efforts, however, were inevitably frustrated by a near-universal tendency on the part of the colonial elites to use their tribal bases as stepping stones to positions of leadership (1964, p. 572).

These various examples serve to show that in Tropical Africa the rise of political parties during the struggle for independence was not necessarily accompanied by a reduction in the use of violence or in the level of internal conflict. On the contrary the requirements of electoral competition, the need to obtain mass support in populations

with ethnic and social divisions often led nationalist leaders to highten these social conflicts by providing them with a political dimension. As Wriggins (1961) points out:

> As long as the majority of citizens can be reached only by appeals to local or traditional ties, there is no surer way of winning political backing than by demonstrating attachment to parochial loyalties (p.563).

Parties and Conflicts after Independence

The achievement of national independence did not remove these sources of internal conflict. On the contrary they acquired a new significance as a result of the disappearance of European colonialism as the common enemy. As Geertz (1963) points out, primordial issues such as language, regional, ethnic and religious policies "show a persistent tendency to emerge in purer, more explicit and more virulent form (1963, p. 124)" once the colonial enemy was vanquished. During the struggle for independence nationalist leaders exploited traditional loyalties for the purpose of electoral politics but nevertheless succeeded in maintaining control. Once independence was achieved these internal divisions which were stimulated by the pre-independence struggles lacked a common enemy. The traditional loyalties then had to be domesticated and stripped of the legitimacy they had acquired prior to independence, but this proved impossible. Independence introduced into African polities a valuable new prize over which to fight, the state apparatus, and an increased number of platforms and instruments with which to carry out this fight. Independence also

brought with it an increased awareness of the cultural differences of each ethnic group, which now tended to define themselves vis-à-vis one another rather than vis-à-vis the dominant European culture. Liberated from the European presence each ethnic group felt the need to reaffirm its own idendity and reposess its own history. The combination of this cultural pluralism and of the availability of political platforms created a situation which often exploded in open social and political conflicts. For example, Morrisson et al. (1970) show that in post-independence Africa cultural pluralism as measured by literacy in a common national language and by religious homogeneity "are consistently associated with decreasing probabilities of both communal and elite instability (p. 205)".

After independence the conflict potential of this awareness of class and ethnicity multiplied by the widely shared expectations that the door to the economic and political ressources would now be open to Africans. When the rate and level of economic development was sufficiently high it was usually possible for the new leaders to prevent a clash between ethnic and economic grievances by providing all the citizens with a share in the increased wealth now available with the departure of many Europeans. The fact that the dependence coefficient between the level of economic development and the level of internal conflict is -.12 confirms this impression. However, after a few years, even a high level of economic development was no longer sufficient to prevent the re-activation of latent ethnic and class

conflicts. In Table XLI, for example the indicator of the level of economic output for the period after 1965 contributes positively (.34) to the level of internal conflict. Thus as time passed either a high or a low level of economic development increase the probability of internal conflict. As Zolberg (1966) suggests the ethnic component never acts alone. It can be activated either by economic deprivation or economic prosperity.

> It is usually accompanied by specific political and economic demands for a more equitable distribution of national income (if the group happens to be relatively less fortunate) or for the retention of a greater share of income produced in the region under some federal or quasi-federal arrangement (if the group happens to be more fortunate (1966, p. 71).

There are other ways in which the process of economic development can increase the level of internal conflict. To the extent that economic development is based on a process of rapid industrialization it will not only activate existing situations but also create new possibilities for social conflict. Industrialization is not only a cause of social dislocation since it moves individuals away from their traditional environment, it also introduced in African societies most of the conflicts present in industrial societies without the mechanisms, notably the trade unions, capable of regulating them. As Zolberg (1966) notes, industrialization attracted large numbers of workers to certain towns or neighbourhoods, where they were easily transformed into mobs. As a result it was relatively easy for them to protest violently against their working conditions, and since their

employer was often the state, their behaviour automatically became a political threat (Zolberg, 1966). Because of their organizational inefficiency, African labour organizations did not succeed in controlling these wild-cat strikes which immediately became political in nature.[6] Empirical results from the dependence analysis confirm this impact of industrialization. In Table XLI the two variables associated with industrialization reveal that this factor contributes positively to the level of internal conflict (.13 and .40)[7]. The importance of industrialization as a generator of social conflicts in Africa is to be found in part in the automation and technological change which accompanies the process of industrialization. In western countries industrialization attracted a large number of rural migrants to the cities where they could always find some form of employment however oppressive and poorly paid. Lofchie (1967) summarizes this situation

> African nations are experiencing industrialization during an era of automation and complexite . . . Cities attract large numbers of rural migrants because they represent opportunity for upward mobility, but since almost invariably new industries are highly automated from their inception, the number of additional jobs is small and expectations go largely unfulfilled. Moreover, the new jobs usually require a relatively high degree of training and skill. This aggravates an already critical gap between elite and mass since cities tend to become increasingly divided between a small number of well-paid workers and a vast majority of unemployed (p.220).

In such a situation, economic development can be said to generate additional pressures on political leaders for costly social welfare programs to alleviate the ills of unemployment.

To the extent that it is not accompanied by an increase in the level of economic autonomy, economic development also increases the probability of internal conflict (the dependence coefficient between the absence of economic autonomy and the level of internal conflict is -.76). When more than 70 per cent of the exports are absorbed by one or two products or are directed to the ex-metropole the economy of a country, even in a period of rapid growth, becomes highly dependent on the fluctuations of international markets and the goodwill of the ex-metropole. For example, a drop in the cocoa prices or a reorganization of French agriculture can have disastrous impact on the cocoa or peanut farmers of the Ivory Coast or Ghana. These workers, who often belong to one ethnic group, will in turn demand that the government subsidize production so as to protect their income.

After independence a high level and a high rate of economic development is usually associated with a high level of social mobilization (the correlation between ECONOC and MOBILI is .82) which in itself is a de-stabilizing factor. Because it entails the re-socialization of individuals social mobilization necessarily introduces divisions based on education, residence and accessibility to physical and social means of communication. Thus a high level of social mobilization should be conducive to a high level of internal conflict. This hypothesis is verified in the case of the aggregate variable MOBILI. Its dependence coefficient with CONFLI is .06. However if the basic indicators of social mobilization (education, urbanization and communication) are considered, it appears on the whole that they inhibit rather than increa-

se the probability of internal conflict (Table XLII). This would suggest that although specific factors associated with social mobilization decrease the probability of internal conflict their joint effect increases this probability.[8]

To meet the challenges of economic development and rising social expectations which threaten the internal stability of their regime political leaders must transform the old unity, founded on opposition to colonial domination, into a new sense of national loyalty, if they hope to diffuse the threat of other competing loyalties. One way to achieve this goal is to make the central government an immediate reality to all the population by extending its presence into all regions and at all levels of social life. Increased government penetration will usually contribute to a decrease in the level of social conflict. However, when it reaches a certain level it can also serve to multiply the points of contention between government administrators and individual citizens. The data from the dependence analysis (Table XLV) confirms this interpretation by revealing that although the level of government penetration decreased the probability of internal conflict (-.03) for the period 1960-66, this trend was reversed after 1966.

A high level of government penetration also decreases the probability of a high level of military intervention (-.18). This confirms Eisenstadt's assertion that in developing societies a strong central bureaucracy can perform a variety of functions critical for the modernization process. These include functions usually fulfilled by political

parties, such as unification and centralization, socialization, aggregation and control of interests and demands. By fulfilling these functions bureaucracies can prevent the politicization of social and ethnic divisions and their eventual transformation into political conflicts. Similarly the fact that party institutionalization is positively related and government penetration negatively related to the level of military intervention and internal conflict confirms the hypothesis of some authors that an overdeveloped bureaucracy can be held responsible for the mal-functioning of political institutions which can result in political conflict and political breakdown. For Riggs (1963) the overdevelopment of a bureaucracy means that political parties simply become the transmission belt of decisions taken by bureaucrats and that as a result "intrabureaucratic struggles become a primary form of politics (1963, p. 120)". Riggs argues that a well-established civil service deprives political parties of those spoils with which it could reward its activists and thus maintain their commitment to political life. Without such spoils a political party, especially in a developing political system, rapidly looses its members. Thus although in the short run the development of an efficient bureaucracy can prevent political instability by effectively replacing political institutions, in the long run this replacement can have grave consequences for the functioning of the overall political system. Even an effective bureaucracy cannot do everything. It lacks the legitimacy

and control over the instruments of violence that a political leader posesses. Furthermore as Lofchie (1967) points out it lacks the capacity to generate an authoritative source of leadership since any bureaucracy is inherently segmented along functional lines that have little to do with the complex patterns of national politics. After a few years as is suggested by the empirical findings cited in Chapter VI, the development of an efficient bureaucratic system can become a source of conflict rather than a mechanism to absorb such conflicts.

For new political leaders the political party undoubtedly remains the best, and often the only, instrument with which to build a new sense of national loyalty. As Wallerstein notes in his observation of post-independence Africa

> Since the government cannot perform the functions necessary for increasing its own integrity, the modernizing elite, which is in control of most of the newly independent African nations, looks around for integrating institutions, mechanisms which are intermediate between the citizen and the state but national in orientation, mechanisms which can attract the necessary loyalty more rapidly and turn this loyalty to the service of the nation (1961, pp. 93-4).

The task of the political party is not an easy one. It must control the local political organizations which grew along side the party and which are based on the promotion of tribal identification. It must deal with the opposition parties (when they exist) which complain about the way in which the dominant party is meeting its new responsibilities. It must also cope with the irredentist movements attempting to redefine

the territorial boundaries of Africa in order to preserve or achieve the integrity of their ethnic group. All these groups plus the local party entrepreneurs, the trade union leaders, the tribal chiefs and even the students make use of the political institutions inherited from the independence struggle to publicize their grievances. Therefore it is not surprising that a high level of party institutionalization should be conducive to the resurgence of internal conflict (.46).

To the extent that a political party succeeds in fulfilling this role of super-governmental agency it also provides a focal point for the ethnic and social divisions in much the same way as the colonial presence ten years earlier.

With the absence of political spoils or a sense of national loyalty, political leaders naturally tend to rely on, or at least to accept corruption as a means of getting things done. Independence and economic development created new sources of power and wealth among a small group of African entrepreneurs, such as the planteurs in the Ivory Coast, who came to need the support of the dominant party to maintain their position in face of local or international competition. Corruption, because it was not equally available to all, constituted an additional factor of division by assisting certain groups and not others.

In such an atmosphere political institutions, especially political parties, tend to act as catalysts for social conflicts not as buffers, as Huntington (1968) suggests. As the political party becomes an effective channel for recruitment in the bureaucracy and access to high political and economic positions it creates further divisions in the social fabric. As a result of independence the nationalist elite and those individuals enlisted to run the machinery of government become a "political-administrative middle class (Young, 1970, pp. 462)" with economic and political interests of their own. Morrisson et al. (1970) describe in vivid terms this rising gap between the new elite and the mass

> When the euphoric anticipation of independence had been satisfied, it became clear in many parts of Africa that the new nationalist politicians had inherited the power and privilege of the Europeans they replaced. The symbolic reality of the classless African society in opposition to the colonial oligarchy became muted by the realization of the extensive gap in opportunity, power and wealth between the new elites of African nations and the mass publics of the territory they now administered (1970, p. 201).

Unless a country has a long tradition and a high level of political participation, the combination of these conflicts which date back to the period of electoral struggle for independence and the new divisions created by the attempts of the dominant party to create a new sense of loyalty, will confront the political leaders with an explosive situation. In the post-independence period, the

existence of ethnic and regional differences have a higher conflict potential than in the pre-independence period because they now threaten the existence of the new nation-state itself. These ethnic loyalties easily become "competing loyalties of the same order, on the same level (Gertz, 1963, p. 111)" as the new national loyalty in the process of formation. Consequently their existence creates an explosive situation since there is not yet a sufficiently high level of value integration to allow for a policy of diversity within unity. Without the minimum value consensus necessary for the development of institutions and procedures which can solve, or at least difuse, social conflicts political leaders come to "emphasize as a goal the avoidance of both conflict and competition through either coercion or exhortation (Weiner, 1965, p. 557)". Quite naturally political parties become the instruments of this exhortation and coercion. Because this explosive situation threatens the integrity of the military organization, it will often force the military to use its institutional weight in order to restore stability and peace to a turbulent environment.

This interpretation of African politics suggests that since 1945 political parties and electoral competition have not contributed to a lowering of regional and ethnic tensions. Prior to independence political parties in Tropical Africa whose objective

was national independence and their own survival in power did not hesitate to make use of violence and ethnic or social strains to achieve their goals. When independence was achieved the new political leaders had to face the task of national construction in addition to that of continuing insuring their own survival. At that point political parties were the only instrument available to political leaders to meet these objectives.

As long as the level of economic growth was high they could hope to meet the rising expectations of the population. But as time passed, expectations were turned into frustrations which even a growing economy could no longer satisfy. In such an atmosphere ethnic divisions which the political parties had themselves helped to accentuate soon merged with economic and political grievances to create the base for a rising level of social conflict. These conflicts originating in the economic and social environment but were given a new impetus by the existing political institutions. This impetus constituted the catalyst which prompted the military to intervene in the political process.

CHAPTER VIII

SUMMARY AND CONCLUSION

The foregoing examination of the process and level of military intervention in the states of Tropical Africa can now be briefly summarized and the major findings integrated into an overall view of the phenomenon of military intervention as it has occurred in Tropical Africa since 1960.

An Environmental Paradigm

Chapter I reviewed the major contributions to the study of military intervention and found that a majority of the explanations available offered either an organizational or a developmental view of this phenomenon. According to the organizational approach, African military coups can best be explained through an examination of the corporate characteristics of the military. For example, Lantier (1967) and Snyder (1969) suggest that African military coups are the result of the existence of a powerful organization, such as the army, which controls the instruments of violence and which is willing to use this control to impose its views. Lefever sees the army's self-definition as a national institution responsible for the nation's survival, as the major cause of military coups, rather than accepting this functional definition of the African army as a violence-oriented organization.

Janowitz (1964), Cartwright (1968) and Mazrui (1969) suggest that the cause of African military coups is to be found in the class and tribal origins of the African officers corps, rather than in the organization's self-definition. They point out that, in Africa, military coups only are but one aspect of a general trend toward the re-tribalization of all aspects of social life. However, Rivkin (1967), Merle (1968) and Newburg (1967) stress the modern organization of African armies as the cause of their willingness to intervene, presumably to prevent an expected breakdown in the process of socio-economic modernization. Finally, Price (1971b) and Feit (1969) suggest that ideology, rather than the corporate structure of African armies is the cause of coups, they believe that the African military intervenes in politics because of the juxtaposition in their ideology of elements of ambivalence and self-assurance.

The developmental interpretation on the other hand, sees the political process in developing countries as the major cause of military coups. According to Huntington:

> The efforts to answer the question: What characterictics the military establishment of a new nation facilitate its involvement in domestic politics? is misdirected because the most important causes of military intervention in politics are not military but political and reflect not the social and organizational characteristics of the military but the political and institutional structure of the society (1968, p. 194).

Finer (1962) sees the low level of political culture in a given country as the decisive factor in the occurence or non-occurence of military coups. Lissak (1967) believes a high level of disequilibrium between the political, economic, social and administrative dimensions of the development process is responsible for the occurence of coups. Focusing strictly on the political process, Huntington (1968) regards military coups as the result of a global process of politicization which affects indiscriminatly the army, the trade unions and the student movement. Finally, Zolberg (1968a, 1968b and 1969) stresses the inflation of force which has characterized post-independence African politics as the major cause of military take-overs.

Both interpretations are vulnerable because of their lack of empirical evidence; their acceptance of western models of military professionalism and political development; their exclusive preoccupation with only the most overt form of military intervention; and their failure to distinguish between the incentives, pretexts, immediate and long-range causes of military intervention.

Chapter II attempted to synthesize these criticisms by integrating the major components of both the organizational and developmental interpretations. This integration into an analytical framework is based on the assumption that in Tropical Africa the characteristics of the military organizations and those of the process of economic,

social and political change combine to bring about a high level of military intervention. In addition to this assumption, this environmental interpretation is based on three other factors. First, it requires that a distinction be made between the military as a corporate organization and the military as a social institution. As a corporate organization, the military is characterized by an ethical ambivalence in defining its goals by a dependency on the state for its legitimacy and by a high level of discipline, hierarchy and *esprit de corps,* which are imposed on the military because of its unique orientation toward violence and danger. At the same time, as an institution, the military is characterized by its importance as the ultimate guardian of the state's integrity and by its consequent domination over all other organizations. These two characteristics dictate the paradoxical nature of the military's position vis-à-vis its socio-economic environment. As an organization, the military is entirely dependent on the state for the definition of its goals and for the provision of its legitimacy and financial support. Yet as an institution, the military serves as an umbrella under which the state carries out its activities. Thus although the military is entirely dependent on its environment for its organizational survival, it can at the same time use its institutional weight to redefine this environment when it feels that its corporate survival is threatened.

The second factor in this environmental interpretation is the idea that military coups do not result from certain characteristics of the military organization or the socio-political environment taken individually but from the exchange process between the military and this socio-economic environment. In return for material (financial) support and non-material resources (legitimacy) from the state, the military organization produces an "identifiable something" (defence). When the stability of this exchange process is threatened by changes the environment, the corporate survival of the military as an organization is also threatened. When this occurs, the military will make use of its institutional weight and its special organizational capabilities to redefine its environment so as to re-establish this exchange process and thus ensure its own survival. In Tropical Africa, military coups and the other less overt forms of military intervention are usually the result of a decision by the military to modify the social, economic and political environment in which it operates.

Thirdly, the environmental interpretation involves a distinction between the actual process of intervention and the level at which it takes place. While the act of intervention can be explained principally by those characteristics of the military organization which affect the exchange relationship with the environment (that is, the nature of the organization's output, its level of development, the permeability of

its boundaries and its level of integration), the level (i.e. frequency) of military intervention depends mainly on the nature and intensity of the environmental changes.

The next four chapters attempted to apply this environmental interpretation in order to obtain a better understanding of the process and the frequency of military intervention in the states of Tropical Africa during the years 1960-71.

The Process of Military Intervention

Part II of this study examined the factors which had the greatest influence on the military's decision to intervene in politics. The emphasis here is not so much on the frequency or distribution of the phenomenon of military intervention but on isolating those factors which led most African armies to abandon their role of political neutrality and to become directly involved in the political arena. Can this change be attributed to a fear of corporate survival? Are military coups the result of a sudden deterioration in the exchange process between the military and its environment? To what extent has the recent creation of African armies, the permeability of their boundaries and the intangible nature of their output influenced the process of military intervention?

A brief historical survey of African armies during the 1880-1945 period reveals that from the start they lacked autonomy and were fully dependent for their goals, legitimacy and internal arrangements

on colonial policies and European politics. Paradoxically this lack of autonomy and the fact that they developed in isolation from the African social and economic environment allowed the African armies great freedom in copying western models of military professionalism. Thus, throughout this period, African armies were characterized by their strength and modernity as organizations but also by their insignificance as social organizations.

After 1945 the interest of the colonial powers in their African regiments diminished considerably and so did their financial support. As a result the African regiments could not expand or modernize their facilities, nor could they institute new training and recruiting programs. Because of the lack of funds and interest on the part of expatriate officers or nationalist leaders, the armies were the last organization in African society to Africanize their leadership. This absence of an Africanization policy tended to deepen the isolation, already evident in the pre-1945 period, of the colonial regiments from the changes taking place in the political environment. Thus, during the period immediately preceeding independence, although the African armies continued to offer a privileged avenue to modernization for individuals and they did not face any open attacks on their legitimacy they were no longer the modern and strong organizations of the pre-1945 days. Since the process of constitutional change was on the whole a peaceful one the African

armies were seldom involved during the 1945-58 period. As a result, the nature of the "identifiable something" produced by African military organizations became increasingly intangible and their immediate utility became less and less evident. Also, although the African armies succeeded in preserving the integrity of their boundaries, they did so only by maintaining a high level of rigidity. The expatriate officers and the few Africans officers succeeded in eliminating political and ethnic considerations, but this success was only achieved at the cost of further isolation from the changing African environment.

The immediate post-independence period (1958-63) saw little change in this state of affairs. The new political leadership showed little interest in their newly acquired armies. In some cases, national armies were only officially created months or even years after independence. African leaders expected little difficulty from their small armies. Nor did they expect to make any major use for them either internally or externally. During this period, the armies showed this same lack of interest, and a willingness to maintain their pre-independence isolation. The military made no effort to play a role in the political process or to impress the political leaders with the special needs of their organizations. Although their organizational capabilities had seriously deteriorated as a result of the pre-independence neglect by the colonial authorities, African military organizations had no basis on which to claim preferential treatment financially. They had played no role in the struggle for independence, they were still led mainly by

expatriate European officers and they were still closely tied to their former colonial masters through defence and training agreements.

This state of mutual ignorance started to change when the political leaders became interested, mainly for reasons of prestige, in the Africanization of the officer corps. At first, particularly in Nigeria, Ghana, Guinea and Tanzania, the political leaders were content to press for an acceleration of the Africanization process through such measures as increased promotions for African officers and the training of African N.C.Os. These suggestions were considered unacceptable to the military, which saw them as an infringement on the integrity of the armed forces.

Four factors contributed to an increase in the permeability of the military's organizational boundaries and to a lower level of internal integration within the military. First, the colonial practice of having regional rather than territorial-based regiments (especially in the French colonies) created geographical and ethnic divisions within the new national armies. Second, because of their recent creation the new national armies found it difficult to infuse their members with a sense of corporate loyalty. Third, the fact that officers of different ranks tended to belong to the same age group and to have the same educational background made it difficult to establish lines of authority when the lower rank officers showed little respect for their senior officers. Finally the fact that the politicians tried to impose ethnic and regional quotas

on the recruitment and promotion policies of the military, prompted some officers to rely on outside help to promote their individual cases.

As the political leaders recognized the importance of force to insure their own survival they became increasingly willing to sacrifice the army's neutrality to protect their own interests. At the same time many politicians, not trusting their official military forces, began to set up para-military forces to fulfill some of the tasks which the army could not meet. Thus while military forces were diverted to civic action projects, para-military units were given greater financial support. By the mid-sixties many African armies were caught in a paradoxical situation. They still benefited from an image of being above politics and from a self-image, created in part by the politicians, as the repository of national virtue. In addition, as a result of the facility with which they stamped out local rebellions and fulfilled their civic action obligations, they inspired confidence in their capacities to meet any challenge. Coexisting with this positive image was the suspicion that armies on the traditional pattern no longer predominated in the plans of the political leaders and that they would eventually be confined to ceremonial or road maintenance duties.

All these factors ultimately combined to lead the African military to intervene openly in the political process. A survey of

the immediate circumstances surrounding each military coup confirms this interpretation. In Ghana, the Central African Republic and the Congo (B), military coups took place as a result of the growing importance given to para-military, police and internal security units. In Mali and Burundi, military coups took place in the wake of persistent rumours that the army would be confined to civic action and its duties transferred to the police. In the case of the Somalian, Sudanese and Dahomean (fourth) coups, the military acted following the disclosure that the new civilian regimes were likely to enact policies judged detrimental to the corporate well-being of the armed forces. Similarly in Sierra Leone (1967), Dahomey (1963) Togo (1966) and Upper Volta (1966) the possible accession to power of other groups, in this case the trade unions, suspected of having a negative view of the armed forces prompted the officers to intervene directly in the political process. In the case of the second Dahomean coup and the second and third Sierra Leonese coup, internal dissension within the armed forces and the possibility that the army would explode as a result of the policies of the civilian-military regimes were sufficient to convince the officer corps to intervene directly in the political process. Finally, the Ghanaian and Upper Voltan coups of 1966 were also motivated by the fear of some officers that the politicians were considering using the army on dangerous missions at home or abroad. It was feared that such missions would endanger the corporate survival

of armies already weakened by internal dissensions and a lack of financial support.

The picture which emerges from this view of the process of military intervention in the states of Tropical Africa is thus considerably different from that suggested by either the organizational or developmental approaches. Both of these interpretations picture a strong, modern and cohesive military force being forced to intervene in order to lead the country back on the road to modernization. Instead it appears that the African military usually intervened in the political arena out of a concern for its own corporate survival and in order to maintain or restore a more favourable environment.

As the nature of the "identifiable something" produced by the African armies became more intangible, as their boundaries became more permeated by outside considerations and as their level of internal integration decreased significantly under the pressures of organizational strains, they found it more and more difficult to either interpret correctly or to control effectively the numerous changes taking place in their environment. As a result of their isolation from the independence struggle and because of their recent transformation into national armies the African armies developed the necessary strategies to either predict or adapt to environmental changes. In such a context, open military intervention often became the only means for the military to re-establish the integrity of an exchange process which would insure it of the legitimacy and financial support necessary for its continued existence.

The Level of Military Intervention

Part III of this study moved from an organizational and historical analysis to an empirical and cross-national survey. In this section, the objective was not so much to reconstruct the immediate factors which led African armies to intervene in the political process but to examine the causal network of environmental changes which increased the probability and the frequency of military intervention.

Chapter IV presented a procedure by which the level of military intervention could be empirically measured over a ten-year period. More complex procedures involving the repeated use of factor analysis were then used to construct six indexes measuring empirically six dimensions of the economic, social and political environment of Africa. Six hypotheses were then presented, linking these various economic, social and political variables to the level of military intervention in politics. These hypotheses were:

(H1) A high level of economic development will decrease the level of military intervention in politics.

(H2) A high level of social mobilization will increase the level of military intervention.

(H3) A high level of political participation will decrease the level of military intervention.

(H4) A high level of party institutionalization will decrease the level of military intervention.

(H5) A high level of government penetration will decrease the level of military intervention.

(H6) A high level of internal conflict will increase the level of military intervention.

The correlation, regression and dependence analyses carried out in chapters V and VI, using both the aggregate index and the basic indicators, suggested converging empirical evidence for four of these hypotheses (H1, H2, H5 and H6). A more detailed analysis using alternate indicators for the environmental factors resulted in a possible explanation for the non-confirmation of the two other hypotheses.

1. Economic development, social mobilization and military intervention

Chapter IV accepted the view of Almond (1963), Apter (1971) and many others that in Tropical Africa a high rate and a high level of economic development inhibits the repeated occurence of military intervention in the political process (H1). The rationale for this hypothesis is simple. In a period of accelerated economic development the military will have little difficulty in obtaining from the government the financial ressources necessary for its organizational growth. In addition, as the economy develops there will be few reasons for the military to intervene in order to restore social peace since the rising

material expectations of all groups should be satisfied as a result in the increased economic benefits now available.

The results of the analysis in Chapter IV confirms that a high level of economic development decreases the occurrence of military intervention although the causal impact of this variable is a relatively minor one. This last finding would seem to confirm Gutteridge's suggestion that repeated military intervention in the political process has little to do with economic conditions

> The fact that the military coups in question have had little impact on the fundamental economic and social structure of these states indicates that they are not revolutionary in the true sense and not to any degree an expression of the deprivation of any sections of society in basic terms (Gutteridge, 1969, p. 150).

It was then hypothesized that a high level of social mobilization would contribute positively to the level of military intervention. Social mobilization constitutes a de-stabilizing force in the political system since it contributes to an increase in expectations which often cannot be met by the new political leadership. Confronted with these rising demands, political authorities will either attempt to satisfy them by diverting financial ressources from the military or contain them by using the military to enforce austerity measures. In both cases the military will be forced to intervene in order to preserve its organizational integrity.

Dependence analysis confirmed this hypothesis but also revealed

that the level of social mobilization like the level of economic development had little direct impact on the level of military intervention. Dependence analysis also revealed that all the various components of economic development or social mobilization had causal impact identical to the causal impact of the aggregated variables ECONOC and MOBILI. For example, the different factors associated with social mobilization -- urbanization, communication and education -- all seemed to decrease the probability of military intervention when taken individually although when combined their impact on military intervention as measured through MOBILI was a positive one. The time factor is also important. While the pre-1965 levels of economic output and education decreased the probability of military intervention, after 1965 these same variables contributed to an increase in the level of intervention.

On the whole it appears that although the causal impact of these two variables, economic development and social mobilization, is in the same direction as that predicted by numerous authors, they do not contribute in an important or immediate way to the level of military intervention. Thus, taken alone changes in the economic and social environment tell very little about the probability of military intervention.

2. <u>Political participation, party institutionalization, government penetration and military intervention</u>

According to the hypothesis of Almond (1963), Black (1966),

Finer (1962) and Hopkins (1969), a high level of political participation, party institutionalization and government penetration decreases the probability of military intervention. In the case of government penetration this hypothesis was verified, suggesting that military coups and similar breakdowns in the modernization process can be avoided if the central authorities possess the administrative, legal and financial capacities to make their presence felt in all sectors of social activity.

On the other hand dependence analysis revealed that a high level of party institutionalization and popular participation in electoral activities both increase the level of military intervention.

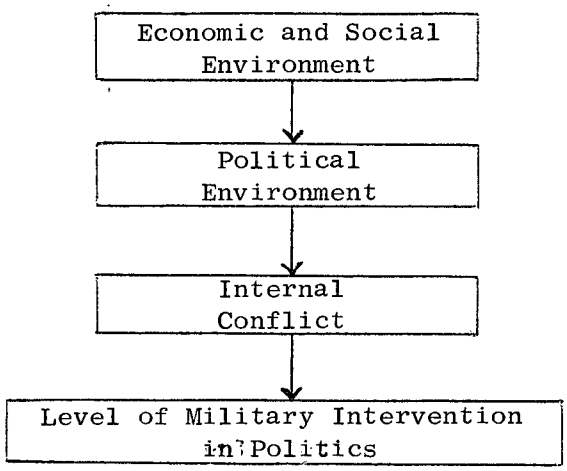
3. Internal conflict and military intervention

Chapter IV hypothesized that the level of internal conflict would be the best predictor of the level of military intervention. This hypothesis was in line with the explanation of the process of military intervention which suggested that military coups occur in periods of social tensions when the integrity of the military organization is felt to be threatened. Dependence analysis confirmed this hypothesis.

In Chapter VII an attempt was made to provide an explanation of what undoubtedly constitute the three major findings of this empirical analysis: the importance of the level of internal conflict and

the positive causal contribution of party institutionalization on the level of military intervention and of political participation and institutionalization on the level of internal conflict. These findings necessitated a reconsideration of the role of political parties during the nationalist and post-independence periods. In Africa, it appears that the institutionalization of political parties did not lead to a decrease in social conflicts. On the contrary because of the requirements of electoral politics, nationalist leaders never hesitated to use ethnic and regional divisions to insure a majority at the polls. As Pye (1966) put it the appearance of parties and elections provided new possibilities for conflicts to "societies which had no idea of their potential for disputation (1966, p. 120)". Clearly the general emphasis in the literature on African political development on the importance of the establishment of formal and institutionalized political institutions reflects the western, rather than the African, experience with political development. In western societies a sense of national identity developed before the establishment of representative structures. This fact allowed political institutions to acquire what Lofchie calls a "consensual validity (1967, p. 286)". In Africa, this has not been the case. Political institutions, such as parties, instead of serving as absorbing mechanisms for the population's rising social and economic demands only served to increase these demands and to provide them with a political dimension which threatened the identity of the new nation-state and the survival of its institutional setting.

This interpretation indicates that the changes taking place in the economic, social and political environment of contemporary Africa all contribute to explain the level of military intervention in the 32 states of Tropical Africa. The causal impact and the causal patterns of these changes are not identical. Some environmental changes have a more profound impact than others. Some are more immediatly connected with the level of military intervention than others. Military intervention is not the automatic and inevitable result of the existence of a development process. Military coups are not an entirely random process. Their occurrence is linked to the presence and a specific ordering of certain environmental characteristics. In Tropical Africa, it appears that military intervention in politics is in fact determined in a three-step process:



Each set of variables acts as a necessary link in a quasi-unidirectional causal chain. Thus in Tropical Africa the institutional and electoral characteristics of political life intensify the ethnic, class and regional divisions in the economic and social environment. In the process these divisions are provided with a political physionomy which increases the level of internal conflict in the society. These conflicts, in turn, precipitate military intervention in the political process.

Critical Assessment and Future Research

This study originally aimed to reach, at least, partially, some of the following objectives: (1) to present and test a new analytical framework for the study of military intervention; (2) to integrate in a single study an historical and organizational approach to the phenomenon of military intervention and a systematic and quantitative approach; and (3) to contribute to the sociology of organizational and political development by identifying some of the dynamics of social, economic and political development which might affect organizations such as the military.

Other approaches were available, and would have resulted in a different view of the phenomenon. One other possibility would be to conduct case studies of African military establishments since it is

unlikely that an understanding of African military coups will progress much further without more detailed knowledge of the individual national military establishments. A comparative study of two countries, one which has and the other which has not experienced a high level of military involvement, could constitute a second avenue of research. By attempting to match specific historical or political variables within two countries, a limited form of control could be introduced. Ghana and Guinea, Ruanda and Burundi, Ghana and the Ivory Coast would constitute possible pairs for such an approach. Finally, a comparison of all the countries in one geographical area could offer a broader scope to the analysis without suffering from the pitfalls of a cross-national study covering 32 states. Alternatively, new analytical paths could be opened by expanding such new theoretical frameworks as the reference-group theory developed by Price (1971a, 1971b) or the dependence theory suggested by Vandycke (1972).

The fact that this causal model explains close to 40 per cent of the variance in the level of military intervention can be taken as evidence of the utility of the environmental interpretation presented in Chapter III. Clearly African military coups do not simply occur at random nor are they the automatic consequence of the organizational characteristics of African armies or of the developmental process, although both environmental and organizational factors are involved. Nevertheless the fact that the causal model still leaves unexplained 60 per cent of the variance in the level of military intervention is

also evidence that one or more important variable has been excluded from the model. This fact alone does not diminish the validity of the explanation, but it does indicate the need for broader research. More variables could be included in the causal model, such as variables which measure the ethnic, religious and class pluralism of African societies. Other variables would benefit from a more refined operationalization. More refined causal techniques would also allow more room for the time element and for the diversity of empirical indicators. This study has presented one way of looking at the problem of military intervention. To some extent, its contribution may be to eliminate itself from the range of plausible approaches. When all other approaches have been considered and eliminated, as Sherlock Holmes concluded, "whatever remains, however improbable, must be the truth".

NOTES AND REFERENCES TO CHAPTER VII

1. On European colonial bureaucracies, see Delavignette, 1950 and Heussler, 1963.

2. On the place of violence in African politics see Le Vine (1965), Mazrui (1969) and Grundy (1971).

3. The question of whether or not to endorse a strategy of total non-violence was a divisive factor at the 1958 All African Peoples Conference in Accra. The Somali, Cameroun and Maghreb representatives supported the use of violence while the other delegations rejected its use.

4. See Suret-Canale (1966) for an analysis of the role of the traditional chiefs in Guinea.

5. However, the nationalist leaders had to be careful in their attacks against this group of privileged Africans. As Wallerstein points out:

> For one thing the middle-class status of the nationalist leadership was ultimately not too different from that of the small upper elite. Thus, as time went on, the class-struggle ideological overtones of nationalism came to be blunted by a new unifying doctrine of anticolonialism (1967, p. 511).

6. On the weaknesses of African Unions see Berg and Butler (1964).

7. The actual coefficient is -.40 since V12 measures the absence rather than the presence of industrialization.

8. An interesting pattern emerges from an examination of the dependence coefficient of ECONOC and MOBILI and the seven basic indicators of CONFLI. While the dependence coefficient (b_{16}) between ECONOC and CONFLI is negative (-.12) all the dependence coefficients of the basic indicators with CONFLI are positive. The reverse is true for MOBILI. Their data suggest that although the overall level of economic development might decrease the probability of social conflict, any imbalance between the various components of economic development can have serious repercussions in terms of social conflicts. For social mobilization it is the cumulative and not the individual effect of urbanization, education and communication which increases the level of internal conflict.

APPENDIX I

DISTRIBUTION OF TYPES OF INCIDENTS OF MILITARY INTERVENTION BY COUNTRY

Country	Mutinies	Unsuccessful Coups	Successful Coups
Botswana			
Burundi		1965	1965, 1966
Cameroun			
C.A.R.		1966, 1968	1966
Chad			
Congo (B)	1963, 1966, 1968	1969, 1970	1963, 1968
Congo (K)	1960, 1961, 1962, 1963, 1964, 1966	1963	1960, 1965
Dahomey		1969	1963, 1964, 1965, 1967, 1969
Ethiopia		1960, 1966	
Gabon		1964	
Gambia			
Ghana	1961	1967, 1968	1966
Guinea			
Ivory Coast			
Kenya	1964		
Lesotho			
Liberia		1963	
Malawi			
Mali			1968
Mauritius			
Niger			
Nigeria			1966, 1966
Rwanda			
Senegal		1962	
Sierra Leone			1967, 1967, 1968
Somali		1961	1969
Sudan	1966	1971	1964, 1969
Tanzania	1964		
Togo		1965, 1966	1963, 1967
Uganda	1964		1971
Upper Volta			1966
Zambia			
TOTAL	14	18	26

APPENDIX II

Name, Definition and Source of the Basic Variables

V1
Name: Money Deposits per capita in CFA francs, 1963
Source: United Nations, Statistical Yearbook, 1966; Union Africaine et Malgache de Cooperation Economique, Etude Monographique, (Dec. 1964), p. 38; African National Integration Project

V2
Name: Paper Money Circulation per capita in CFA francs, 1963
Source: United Nations, Statistical Yearbook, 1966; Union Africaine et Malgache de Cooperation Economique, Etude Monographique, (Dec. 1964), p. 38; African National Integration Project

V3
Name: Public investment as percent of GDP, 1960
Source: African National Integration Project

V4
Name: Public investment per capita in hundreds of CFA francs, 1960
Source: African National Integration Project

V5
Name: Consumer Price Index, 1965
Definition: Ratio of prices in 1965 to prices in 1968 times 100; increase of index indicates rising prices
Source: African National Integration Project

V6
Name: Per Capita Gross Domestic Product in U.S. dollars, 1958
Source: United Nations, Statistical Yearbook, 1967

V7
Name: Per Capita Gross Domestic Product in U.S. dollars, 1963
Source: African National Integration Project

V8
Name: Gross National Product per capita in U.S. dollars, 1967
Source: Estimate by the author

V9
Name: Percent Change in Gross National Product per capita, in U.S. dollars, 1958-63
Source: Estimate by the author

V10
Name: Per Capita Gross National Product, 1968, in U.S. dollars at factor prices
Source: African National Integration Project

V11
Name: Average annual percent change in per capita GNP from 1961 to 1968 at factor prices
Source: African National Integration Project

V12
Name: Percent labour force in Agriculture, 1968
Source: African National Integration Project

V13
Name: Index of Total Agricultural Production, 1960-61
Source: African National Integration Project

V14

Name: Index of per capita Agricultural Production, 1969 (1957-59 = 100)
Source: Agency for International Development, AID Data Book, 1970

V15

Name: 1968 Electricity Production as a percent of 1963 production
Source: African National Integration Project

V16

Name: Per capita Commercial Energy Consumption in kilogrammes of coal equivalent, 1966
Source: African National Integration Project

V17

Name: Electricity Production per capita in kilowatt, 1965
Source: United Nations, Statistical Yearbook, 1968; African National Integration Project

V18

Name: Per capita Energy Consumption in kilogrammes of coal equivalent, 1963
Source: United Nations, Statistical Yearbook, 1965; African National Integration Project

V19

Name: Per capita Energy Consumption in kilogrammes of coal equivalent, 1966
Source: African National Integration Project

V20

Name: Number of Wage Earners as percent of Active Population, 1963
Source: African National Integration Project

V21
Name: Ratio of Civil Servants to Number of Wage Earners times 100, 1966-67
Source: African National Integration Project

V22
Name: Number of Industrial Types possible by 1980
Definition: An estimate by ewing of the types of industries normally requiring the market of two or three countries that could possibly be established in countries by 1980; grouped so that the data underestimates range in some cases; total of 45 categories; see source for full list
Source: African National Integration Project

V23
Name: Difficulty in Achieving Economic Growth, 1967
Definition: Scoring is as follows: 1 = growth not difficult
2 = growth not very difficult
3 = growth difficult
4 = growth very difficult
Source: African National Integration Project

V24
Name: Trade with Metropole as percent of total trade, 1962
Definition: Total trade is the sum of exports and imports
Source: African National Integration Project

V25
Name: Balance of Trade in millions U.S. dollars, 1965
Source: Agency for International Development, AID Economic Data Book, 1967, p. 7

V26
Name: Trade as percent of GNP, 1968
Definition: The sum of Exports and Imports divided by GNP for the year 1968
Source: African National Integration Project

V27
Name: Minimum Number of Items Making up 70 per cent of exports, 1966-68
Source: African National Integration Project

V28
Name: Inhabitants per physician in hundreds, most recent year
Source: African National Integration Project

V29
Name: Average Annual Percent Change in the Number of Doctors, 1960-63
Source: African National Integration Project

V30
Name: Percent Population in Cities 20,000 or more, 1965
Definition: The population of the largest cities includes the urban agglomeration
Source: African National Integration Project

V31
Name: Number of Radios per 1,000 population, 1965
Source: African National Integration Project

V32
Name: Telephones per 10,000, 1968
Source: African National Integration Project

V33
Name: Commercial vehicles per 100,000 population, 1966
Source: African National Integration Project

V34
Name: Automobiles per 10,000 population, 1966
Source: African National Integration Project

V35
Name: Secondary Enrollment per 10,000 population, 1962
Source: African National Integration Project

V36
Name: Secondary Enrollment per 10,000 population, 1966
Source: African National Integration Project

V37
Name: Total in Higher Education as percent of Higher Education Age Group times 10, 1961
Source: African National Integration Project

V38
Name: Percent of Vote Cast for the New Ruling Party in Last Election Prior to Independence
Source: African National Integration Project

V39
Name: Number of National Elections Prior to Independence
Source: African National Integration Project

V40
Name: Number of Voters Voting in the First Election after Independence that was at least 4 years after Independence, in percent of Total Population
Source: African National Integration Project

V41
Name: Number of Votes for New Ruling Party in the First Election after Independence that was at least four years after Independence, as a percent of the total Vote
Source: African National Integration Project

V42
Name: Number of Legal Parties with Legislative Representation at Independence
Source: African National Integration Project

V43
Name: Number of Political Parties from Independence to 1969 which were not banned for the Entire Period
Source: African National Integration Project

V44
Name: Number of Splits, 1957-69
Source: African National Integration Project

V45
Name: Legislative Fractionalization at Independence
Definition: The index is one minus the sum of the party proportions squared. Independents are treated as belonging to a single party; the index is computed on the basis of seats won in the election closest to, but before the date of, independence. The values of this index are interpreted like those of a correlation coefficient.
Source: African National Integration Project

V46
Name: Government Revenue as percent of GNP, 1966
Source: African National Integration Project

V47
Name: Ratio of Government Spending to GNP, rate of growth, 1963-65
Source: African National Integration Project

V48
Name: Central Government Revenue, rate of growth, 1963-65
Source: African National Integration Project

V49
Name: Government Expenditures in 1968, millions of U.S. dollars
Source: African National Integration Project

V50
Name: Ratio of Government Spending to GNP, rate of growth, 1963-68
Source: African National Integration Project

V51
Name: Number of Demonstrations, from Independence to 1969
Definition: Events involving relatively organized and non-violent activity, in which the aim of the participants is to protest some specific action on the part of domestic political authorities. When demonstrations are counteracted by violence on the part of either (notably police) they become riots.
Source: African National Integration Project

V52
Name: Days of Rioting, from Independence to 1969
Definition: Riots are defined as events involving relatively spontaneous, short-lived but violent activity in which the generalized aims of the insurgents or the objects of their aggression are not coherently specified
Source: African National Integration Project

V53
Name: Number of Declared Emergencies, from Independence to 1969
Definition: Formal declarations of emergency by the national government in response to real or presumed threats to the public order. Such declarations include the imposition of martial law, curfews, and prohibitions against public assembly.
Source: African National Integration Project

V54

Name: Number of Years of Civil Wars, from Independence to 1969

Definition: An event in which an identifiable communal group attempts by secession to form a new polity based on boundaries of ethnic community, or by take-over to monopolize political power for the communal group within the existing political system.

Source: African National Integration Project

V55

Name: Arrests per million, from independence to 1969

Definition: The number of persons arrested for political offences, whether specifically tied to instability events or not

Source: African National Integration Project

V56

Name: Log (Base E) killed per million population during instability events, from independence to 1969

Source: African National Integration Project

V57

Name: Total Number of Recorded Instability Events, from Independence to 1969

Source: African National Integration Project

APPENDIX III

THE BASIC INDICATORS USED TO CONSTRUCT THE COMPOSITE INDEPENDENT VARIABLES

(a:- -999.9 is the code for missing data)

	V1	V2	V3	V4	V5	V6	V7	V8
Botswana	-999.9[a]	-999.9	-999.9	-999.9	-999.9	44.0	51.0	95.0
Burundi	7.0	104.0	-999.9	-999.9	150.0	40.0	81.0	52.0
Cameroon	26.0	290.0	47.0	14.0	119.0	92.0	109.0	142.0
CAR	12.0	178.0	33.0	9.0	134.0	90.0	106.0	130.0
Chad	6.0	166.0	43.0	7.0	151.0	52.0	64.0	78.0
Congo (B)	77.0	400.0	75.0	25.0	145.0	157.0	172.0	175.0
Congo (K)	124.0	500.0	10.0	2.0	104.4	87.0	116.0	80.0
Dahomey	14.0	165.0	66.0	11.0	-999.9	65.0	70.0	73.0
Ethiopia	11.0	120.0	70.0	12.0	128.0	40.0	45.0	66.0
Gabon	74.0	920.0	1951.0	39.0	114.0	240.0	325.0	390.0
Gambia	23.0	664.0	-999.9	16.0	-999.9	69.0	70.0	95.0
Ghana	42.0	542.0	53.0	26.0	181.0	152.0	207.0	213.0
Guinea	10.0	180.0	134.0	30.0	-999.9	86.0	96.0	83.0
Ivory Coast	36.0	561.0	62.0	26.0	114.0	131.0	188.0	276.0
Kenya	60.0	800.0	70.0	11.0	112.0	90.0	97.0	119.0
Lesotho	-999.9	-999.9	-999.9	-999.9	-999.9	48.0	48.0	90.0
Liberia	57.0	437.0	65.0	28.0	101.0	162.0	238.0	216.0
Malawi	59.0	630.0	250.0	25.0	106.0	35.0	38.0	52.0
Mauritia	12.0	292.0	195.0	33.0	121.0	57.0	102.0	150.0
Mali	7.0	163.0	48.0	8.0	-999.9	60.0	66.0	71.0
Niger	8.0	114.0	43.0	7.0	104.0	69.0	77.0	86.0
Nigeria	8.0	150.0	32.0	6.0	117.0	48.0	61.0	107.0
Rwanda	7.0	104.0	-999.9	-999.9	130.0	40.0	81.0	40.0
Senegal	57.0	550.0	50.0	24.0	126.0	174.0	183.0	215.0
Sierra Leone	19.0	240.0	65.0	26.0	124.0	64.0	123.0	156.0
Somali	19.0	253.0	100.0	10.0	160.0	51.0	65.0	50.0
Sudan	22.0	297.0	100.0	16.0	117.0	82.0	94.0	110.0
Tanzania	21.0	196.0	43.0	6.0	105.0	52.0	65.0	73.0
Togo	71.0	160.0	32.0	6.0	-999.9	71.0	79.0	119.0
Uganda	10.0	180.0	82.0	12.0	123.0	65.0	69.0	93.0
Upper Volta	6.0	89.0	42.0	4.0	150.0	37.0	45.0	50.0
Zambia	50.0	580.0	85.0	40.0	116.0	130.0	158.0	297.0

	V18	V19	V20	V21	V22	V23	V24
Botswana	-999.9	-999.9	2.0	25.0	-999.9	-999.9	10.0
Burundi	12.0	12.0	8.0	-999.9	1.0	4.0	20.0
Cameroon	60.0	73.0	7.0	20.0	15.0	2.0	57.0
CAR	30.0	33.0	11.0	21.0	3.0	4.0	59.0
Chad	14.0	12.0	3.0	32.0	6.0	4.0	64.0
Congo (B)	145.0	180.0	17.0	28.0	15.0	3.0	51.0
Congo (K)	81.0	90.0	17.0	-999.9	16.0	2.0	32.0
Dahomey	27.0	24.0	3.0	54.0	5.0	4.0	69.0
Ethiopia	10.0	16.0	3.0	-999.9	7.0	2.0	37.0
Gabon	193.0	80.0	18.0	23.0	7.0	1.0	61.0
Gambia	44.0	42.0	6.0	-999.9	1.0	4.0	55.0
Ghana	108.0	95.0	10.0	-999.9	19.0	2.0	33.0
Guinea	102.0	99.0	4.0	16.0	9.0	1.0	17.0
Ivory Coast	83.0	159.0	10.0	13.0	13.0	1.0	54.0
Kenya	129.0	124.0	12.0	-999.9	27.0	2.0	30.0
Lesotho	-999.9	-999.9	-999.9	35.0	0999.9	-999.9	10.0
Liberia	171.0	294.0	12.0	15.0	5.0	2.0	41.0
Malawi	34.0	37.0	6.0	-999.9	1.0	3.0	34.0
Mauritias	29.0	53.0	5.0	41.0	5.0	3.0	55.0
Mali	19.0	21.0	3.0	33.0	11.0	4.0	15.0
Niger	14.0	14.0	3.0	38.0	4.0	4.0	54.0
Nigeria	33.0	52.0	2.0	-999.9	29.0	2.0	39.0
Rwanda	15.0	16.0	7.0	-999.9	2.0	4.0	31.0
Senegal	115.0	145.0	8.0	35.0	17.0	2.0	74.0
Sierra Leone	86.0	38.0	7.0	54.0	7.0	3.0	46.0
Somali	21.0	26.0	3.0	-999.9	2.0	4.0	38.0
Sudan	58.0	78.0	10.0	-999.9	8.0	2.0	21.0
Tanzania	47.0	62.0	8.0	-999.9	12.0	3.0	45.0
Togo	34.0	54.0	3.0	49.0	3.0	4.0	41.0
Uganda	34.0	50.0	6.0	-999.9	12.0	1.0	20.0
Upper Volta	10.0	12.0	3.0	33.0	5.0	4.0	47.0
Zambia	406.0	34.0	12.0	-999.9	18.0	2.9	30.0

	V9	V10	V11	V12	V13	V14	V15	V16
Botswana	116.0	100.0	0.8	91.0	-999.9	-999.9	0.0	-999.9
Burundi	30.0	50.0	-999.9	95.0	125.0	96.0	121.0	-999.9
Cameroon	54.0	140.0	1.1	84.0	136.0	111.0	90.0	13.0
CAR	44.0	120.0	-0.6	90.0	119.0	-999.9	206.0	-999.9
Chad	50.0	60.0	-1.5	92.0	119.0	-999.9	238.0	-999.9
Congo (B)	11.0	230.0	2.5	64.0	119.0	-999.9	129.0	-999.9
Congo (K)	8.0	90.0	-0.3	69.0	91.0	71.0	145.0	17.0
Dahomey	12.0	80.0	1.1	84.0	111.0	112.0	139.0	-999.9
Ethiopia	65.0	70.0	2.6	88.0	114.0	108.0	206.0	1.0
Gabon	63.0	210.0	0.7	84.0	119.0	-999.9	188.0	-999.9
Gambia	38.0	100.0	-0.1	87.0	110.0	-999.9	217.0	17.0
Ghana	40.0	170.0	-0.7	56.0	148.0	107.0	551.0	28.0
Guinea	3.0	90.0	2.7	85.0	122.0	80.0	129.0	3.0
Ivory Coast	144.0	260.0	4.8	86.0	201.0	145.0	234.0	-999.9
Kenya	32.0	130.0	1.4	88.0	145.0	120.0	134.0	36.0
Lesotho	88.0	80.0	1.2	90.0	-999.9	-999.9	0.0	-999.9
Liberia	33.0	210.0	0.7	80.0	107.0	101.0	264.0	6.0
Malawi	49.0	50.0	2.2	81.0	140.0	100.0	251.0	4.0
Mauritia	163.0	180.0	11.3	89.0	120.0	-999.9	167.0	-999.9
Mali	18.0	90.0	1.3	90.0	116.0	102.0	167.0	-999.9
Niger	25.0	70.0	-1.6	96.0	148.0	118.0	179.0	-999.9
Nigeria	123.0	70.0	-0.3	80.0	131.0	89.0	124.0	14.0
Rwanda	0.0	70.0	1.5	95.0	125.0	84.0	273.0	-999.9
Senegal	24.0	170.0	-1.4	74.0	140.0	102.0	141.0	-999.9
Sierra Leone	144.0	150.0	1.5	75.0	106.0	107.0	200.0	9.0
Somali	0.0	60.0	0.2	89.0	179.0	-999.9	178.0	4.0
Sudan	34.0	100.0	-0.4	78.0	127.0	123.0	236.0	15.0
Tanzania	40.0	80.0	1.2	95.0	141.0	107.0	172.0	12.0
Togo	68.0	100.0	0.5	79.0	125.0	98.0	273.0	10.0
Uganda	43.0	110.0	1.1	89.0	122.0	98.0	147.0	4.0
Upper Volta	35.0	50.0	0.1	87.0	113.0	94.0	144.0	-999.9
Zambia	127.0	220.0	3.6	81.0	140.0	131.0	133.0	66.0

	V25	V26	V27	V28	V29	V30	V31	V32
Botswana	0.0	-999.9	1.0	197.0	-8.0	211.0	7.0	50.0
Burundi	-8.0	22.0	1.0	563.0	4.0	22.0	6.0	9.0
Cameroon	-12.0	49.0	4.0	267.0	8.0	91.0	35.0	9.0
CAR	-1.0	39.0	2.0	360.0	-999.9	255.0	32.0	19.0
Chad	-4.0	24.0	1.0	724.0	8.0	60.0	9.0	11.0
Congo (B)	-18.0	93.0	2.0	116.0	11.0	306.0	67.0	103.0
Congo (K)	65.0	63.0	3.0	211.0	117.0	151.0	15.0	14.0
Dahomey	-20.0	71.0	2.0	315.0	28.0	101.0	18.0	19.0
Ethiopia	-34.0	18.0	3.0	627.0	15.0	50.0	15.0	15.0
Gabon	34.0	96.0	3.0	67.0	11.0	184.0	80.0	86.0
Gambia	-2.0	95.0	2.0	187.0	7.0	128.0	150.0	38.0
Ghana	-130.0	37.0	3.0	141.0	44.0	161.0	65.0	42.0
Guinea	3.0	27.0	2.0	203.0	-999.9	70.0	19.0	17.0
Ivory Coast	41.0	69.0	3.0	173.0	22.0	142.0	15.0	59.0
Kenya	-54.0	51.0	6.0	95.0	10.0	65.0	39.0	61.0
Lesotho	-6.0	-999.9	2.0	261.0	-2.0	0.0	28.0	20.0
Liberia	31.0	120.0	1.0	106.0	4.0	126.0	127.0	30.0
Malawi	-16.0	59.0	4.0	469.0	4.0	37.0	19.0	23.0
Mauritia	33.0	65.0	1.0	300.0	8.0	0.0	36.0	25.0
Mali	-35.0	19.0	6.0	652.0	5.0	70.0	6.0	16.0
Niger	-13.0	21.0	2.0	588.0	3.0	38.0	18.0	8.0
Nigeria	-21.0	21.0	4.0	365.0	1.0	135.0	12.0	14.0
Rwanda	-7.0	26.0	2.0	624.0	-999.9	0.0	6.0	4.0
Senegal	-36.0	29.0	1.0	167.0	7.0	234.0	67.0	67.0
Sierra Leone	-20.0	49.0	2.0	164.0	4.0	67.0	42.0	28.0
Somali	-17.0	55.0	2.0	283.0	-999.9	137.0	13.0	17.0
Sudan	-13.0	22.0	3.0	246.0	5.0	61.0	20.0	30.0
Tanzania	9.0	58.0	6.0	168.0	5.0	54.0	9.0	23.0
Togo	-18.0	42.0	3.0	221.0	20.0	74.0	17.0	16.0
Uganda	45.0	51.0	2.0	78.0	-999.9	29.0	57.0	31.0
Upper Volta	-22.0	25.0	3.0	762.0	9.0	40.0	10.0	6.0
Zambia	200.0	109.0	1.0	116.0	32.0	199.0	13.0	114.0

	V33	V34	V35	V36	V37	V38	V39	V40
Botswana	346.0	40.0	17.0	32.0	7.0	87.0	1.0	12.0
Burundi	46.0	6.0	13.0	12.0	8.0	81.0	1.0	26.0
Cameroon	400.0	35.0	60.0	53.0	40.0	50.0	4.0	44.0
CAR	183.0	25.0	24.0	33.0	9.0	89.0	8.0	49.0
Chad	160.0	10.0	10.0	24.0	5.0	68.0	8.0	41.0
Congo (B)	556.0	88.0	21.0	151.0	50.0	58.0	8.0	65.0
Congo (K)	180.0	23.0	51.0	33.0	10.0	25.0	1.0	0.0
Dahomey	206.0	24.0	29.0	43.0	30.0	16.0	7.0	35.0
Ethiopia	39.0	12.0	7.0	22.0	10.0	15.0	0.0	19.0
Gabon	448.0	120.0	84.0	101.0	40.0	50.0	7.0	71.0
Gambia	536.0	60.0	89.0	110.0	20.0	60.0	2.0	40.0
Ghana	235.0	40.0	28.0	213.0	40.0	57.0	3.0	36.0
Guinea	230.0	40.0	12.0	46.0	20.0	77.0	6.0	51.0
Ivory Coast	800.0	100.0	57.0	83.0	40.0	100.0	8.0	48.0
Kenya	146.0	80.0	35.0	51.0	20.0	54.0	3.0	21.0
Lesotho	58.0	0.0	15.0	33.0	20.0	42.0	2.0	36.0
Liberia	625.0	70.0	61.0	104.0	80.0	99.0	0.0	55.0
Malawi	170.0	20.0	12.0	17.0	1.0	99.0	3.0	3.0
Mauritia	251.0	10.0	1.0	14.0	9.0	100.0	0.0	47.0
Mali	119.0	10.0	12.0	2.0	9.0	76.0	7.0	54.0
Niger	128.0	8.0	8.0	9.0	3.0	77.0	7.0	62.0
Nigeria	65.0	10.0	43.0	39.0	20.0	28.0	4.0	14.0
Rwanda	31.0	8.0	12.0	9.0	8.0	78.0	1.0	46.0
Senegal	526.0	80.0	60.0	72.0	50.0	83.0	7.0	37.0
Sierra Leone	324.0	60.0	51.0	57.0	20.0	46.0	1.0	30.0
Somali	240.0	20.0	24.0	28.0	20.0	76.0	2.0	52.0
Sudan	128.0	20.0	56.0	66.0	40.0	8.0	2.0	8.0
Tanzania	200.0	30.0	19.0	20.0	16.0	83.0	3.0	23.0
Togo	24.0	5.0	53.0	75.0	20.0	60.0	7.0	36.0
Uganda	77.0	40.0	56.0	118.0	10.0	52.0	3.0	15.0
Upper Volta	103.0	9.0	7.0	11.0	5.0	60.0	7.0	51.0
Zambia	390.0	110.0	23.0	63.0	1.0	70.0	6.0	21.0

	V41	V42	V43	V44	V45	V46	V47	V48
Botswana	69.0	2.0	6.0	2.0	18.0	21.0	0.0	30.0
Burundi	60.0	2.0	5.0	1.0	17.0	11.0	20.0	0.0
Cameroon	94.0	2.0	11.0	0.0	68.0	13.0	20.0	42.0
CAR	99.0	2.0	6.0	1.0	14.0	27.0	0.0	76.0
Chad	99.0	3.0	3.0	0.0	50.0	16.0	27.0	54.0
Congo (B)	89.0	2.0	6.0	0.0	26.0	33.0	15.0	27.0
Congo (K)	68.0	15.0	17.0	4.0	86.0	31.0	121.0	56.0
Dahomey	69.0	3.0	8.0	0.0	59.0	16.0	11.0	28.0
Ethiopia	80.0	0.0	0.0	0.0	0.0	11.0	0.0	50.0
Gabon	99.0	2.0	6.0	0.0	60.0	26.0	6.0	49.0
Gambia	65.0	3.0	6.0	2.0	52.0	26.0	7.0	40.0
Ghana	99.0	7.0	13.0	0.0	50.0	16.0	0.0	46.0
Guinea	99.0	1.0	1.0	0.0	14.0	32.0	-42.0	21.0
Ivory Coast	99.0	1.0	1.0	0.0	0.0	22.0	0.0	49.0
Kenya	100.0	3.0	5.0	1.0	57.0	17.0	11.0	34.0
Lesotho	40.0	3.0	8.0	2.0	56.0	13.0	0.0	21.0
Liberia	100.0	1.0	1.0	0.0	0.0	22.0	0.0	26.0
Malawi	99.0	2.0	3.0	0.0	12.0	19.0	31.0	44.0
Mauritia	100.0	1.0	6.0	0.0	0.0	17.0	-39.0	35.0
Mali	100.0	1.0	1.0	0.0	0.0	18.0	7.0	22.0
Niger	99.0	1.0	1.0	0.0	18.0	15.0	8.0	19.0
Nigeria	30.0	5.0	14.0	3.0	66.0	9.0	10.0	47.0
Rwanda	95.0	4.0	5.0	1.0	34.0	7.0	9.0	16.0
Senegal	95.0	1.0	6.0	2.0	0.0	18.0	8.0	19.0
Sierra Leone	35.0	5.0	7.0	2.0	52.0	14.0	-20.0	12.0
Somali	60.0	6.0	9.0	4.0	53.0	22.0	11.0	50.0
Sudan	50.0	4.0	11.0	0.0	60.0	18.0	-10.0	21.0
Tanzania	96.0	1.0	3.0	2.0	15.0	17.0	18.0	43.0
Togo	89.0	3.0	5.0	2.0	45.0	13.0	-13.0	17.0
Uganda	52.0	3.0	5.0	3.0	71.0	17.0	23.0	50.0
Upper Volta	99.0	1.0	2.0	3.0	26.0	14.0	-25.0	15.0
Zambia	73.0	3.0	6.0	3.0	26.0	38.0	100.0	88.0

	V49	V50	V51	V52	V53	V54	V55	V56	V57
Botswana	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Burundi	6.0	0.0	0.0	2.0	4.0	1.0	388.0	7.0	4.0
Cameroon	26.0	90.0	0.0	0.0	2.0	0.0	48.0	4.0	0.0
CAR	27.0	31.0	0.0	0.0	0.0	0.0	14.0	0.0	1.0
Chad	15.0	73.0	1.0	3.0	1.0	1.0	40.0	7.0	5.0
Congo (B)	71.0	58.0	5.0	4.0	3.0	0.0	334.0	6.0	3.0
Congo (K)	17.0	57.0	8.0	6.0	6.0	5.0	186.0	8.0	14.0
Dahomey	13.0	-5.0	3.0	17.0	3.0	0.0	120.0	3.0	4.0
Ethiopia	7.0	9.0	7.0	3.0	0.0	4.0	48.0	5.0	10.0
Gabon	92.0	50.0	0.0	2.0	2.0	0.0	159.0	3.0	0.0
Gambia	20.0	-22.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Ghana	49.0	0.0	1.0	4.0	3.0	0.0	218.0	1.0	4.0
Guinea	33.0	35.0	0.0	2.0	0.0	0.0	175.0	0.0	1.0
Ivory Coast	64.0	32.0	1.0	1.0	1.0	1.0	237.0	1.0	1.0
Kenya	24.0	16.0	0.0	5.0	4.0	0.0	40.0	5.0	5.0
Lesotho	10.0	0.0	0.0	0.0	0.0	0.0	37.0	3.0	0.0
Liberia	62.0	11.0	1.0	3.0	1.0	0.0	150.0	3.0	1.0
Malawi	16.0	50.0	0.0	2.0	0.0	0.0	122.0	1.0	3.0
Mauritia	23.0	-30.0	1.0	3.0	1.0	0.0	151.0	3.0	1.0
Mali	8.0	-14.0	1.0	1.0	0.0	0.0	68.0	0.0	3.0
Niger	11.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0	2.0
Nigeria	9.0	-20.0	6.0	54.0	6.0	4.0	612.0	11.0	8.0
Rwanda	4.0	0.0	0.0	0.0	1.0	3.0	19.0	8.0	3.0
Senegal	51.0	0.0	2.0	4.0	0.0	0.0	164.0	0.0	1.0
Sierra Leone	20.0	-13.0	0.0	6.0	2.0	0.0	204.0	2.0	2.0
Somali	14.0	53.0	0.0	6.0	1.0	0.0	16.0	1.0	3.0
Sudan	23.0	15.0	2.0	21.0	6.0	7.0	132.0	5.0	14.0
Tanzania	13.0	25.0	1.0	1.0	0.0	0.0	4.0	1.0	0.0
Togo	13.0	-25.0	0.0	2.0	1.0	0.0	76.0	2.0	3.0
Uganda	21.0	41.0	0.0	2.0	5.0	0.0	355.0	4.0	4.0
Upper Volta	6.0	-35.-	0.0	4.0	2.0	0.0	10.0	4.0	1.0
Zambia	118.0	200.0	0.0	7.0	2.0	0.0	161.0	4.0	1.0

APPENDIX IV

The Boudon Method of Dependence Analysis

The formal derivation of his method originates from an equation of the form:

$$X_3 = C_3 + a_{13}X_1 + a_{23}X_2 + e_3 \qquad (7.1)$$

In equation (7.1) a_{13} and a_{23} are respectively the regression coefficients of X_3 on X_2 when X_1 is controlled for, and of X_3 on X_1 when X_2 is controlled for. When these regression coefficients are in a standardized form a_{13} (σ_1^2/σ_2^2) They can be interpreted as the measure of the causal influence of variable X_1 on variable X_3 and of variable X_2 on variable X_3 . This procedure of multiplying the unstandardized regression coefficients by σ_1/σ_2 applies only in the case of simple structures such as equation 7.1, that is when the determined variable depends on one or more determining variables which in turn are not dependent on any other determining variables. A more involved set of derivations is used by Boudon to show that in the case of a complex structure, standardized regression coefficients, or dependence coefficients as he calls them, can also be estimated and interpreted as measures of causal influence. This result is achieved by rearranging the system of equations so that all the unknowns in the

equations are standardized regression coefficients and all the known expressions correlation coefficients. For example, equation 7.1 can be written:

$$a_{13}X_1 + a_{23}X_2 + X_3 = e_3 \qquad (7.6)$$

Multiplying through by each of the determining variables (X_1 and X_2) two new equations result:

$$a_{13}X_1^2 + a_{23}X_2X_1 + X_3X_1 = e_3X_1 \qquad (7.7)$$

$$a_{13}X_1X_2 + a_{23}X_2^2 = X_3X_2 = e_3X_2 \qquad (7.8)$$

Assuming that the error terms are uncorrelated it can be established that $e_3X_1 = 0$ and $e_3X_2 = 0$. Replacing the unstandardized by the standardized regression coefficients (b's) two new equations result:

$$b_{13}\ (s_3/s_1)\ X_1^2 + b_{23}\ (s_3/s_2)\ X_2X_1 + X_3X_1 + X_3X_1 = 0 \qquad (7.9)$$

$$b_{13}\ (s_3/s_1)\ X_1X_2 + b_{23}\ (s_3/s_2)\ X_2^2 + X_3X_2 = 0 \qquad (7.10)$$

However, the correlation coefficient between any two variables xi and y, can be written in the following raw score form:

$$r_{xy} = \frac{\sum_{i=1}^{n} (x_iy_i/N) - (\bar{X}\bar{Y})}{s_xs_y} \qquad (7.11)$$

$$= \frac{\sum_{i=1}^{n} (x_i - \bar{X})\ (y_i - \bar{Y})}{N\ (s_xs_y)} \qquad (7.12)$$

Standardized equation 7.12 then becomes:

$$r_{xy} = \frac{\sum_{i=1}^{n} n_i y_i}{N\ (s_x s_y)} \qquad (7.13)$$

It then follows that:

$$\sum_{i=1}^{n} x_i y_i = r_{xy} \quad N\ (s_x s_y) \qquad (7.14)$$

If the variables X and Y are assumed to be normally distributed the expected value of any $n_i\ y_i$ is equal to the correlation coefficient between the two variables times the product of their standard deviations ($r_{xy}\ s_x s_y$). Replacing the cross-products terms in equations (7.9) and (7.10) by correlation coefficients and standard deviations it follows that:

$$b_{13}\ (s_3/s_1)\ (s_1^2) = b_{23}\ (s_3/s_2)\ \ r_{12}\ (s_1 s_2)\ \ + r_{13}\ (s_1 s_3) = 0 \qquad (7.9a)$$

$$b_{13}\ \frac{(s_3 s_1^2)}{s_1} + r_{12} b_{23}\ \ (s_3/s_2)\ (s_1 s_2) + r_{13}\ (s_1 s_3) = 0 \qquad (7.9b)$$

$$b_{13}\ (s_3 s_1) + r_{12} b_{23}\ (s_1 s_3) + r_{13}\ (s_1 s_3) = 0 \qquad (7.9c)$$

$$b_{13} = r_{12} b_{23} = r_{13} = 0 \qquad (7.15)$$

Similarly from (7.10) (7.16) emerges:

$$b_{13} r_{12} + b_{23} + r_{23} = 0 \qquad (7.16)$$

Since the three correlation coefficients can be calculated directly from the data we can solve (7.15) and (7.16) for a_{13} and a_{23}. The same procedure can be repeated for the other subset of equations.

In the case where the error terms are correlated the size of the dependence coefficients will be inflated. For example if in equation (7.7), $e_3 = 0$, then equation (7.9) becomes:

$$b_{13}\ (s_3/s_1)\ X_1^2 + b_{23}\ (s_3/s_2)\ X_2X_1 + X_3X_1 = e_3X_1 \qquad (7.22)$$

and ultimately (7.22) becomes:

$$b_{13} + r_{12}b_{23} + r_{13} - \frac{r_3r_1s_es_1}{s_3s_1} = 0$$

The presence of this additional term on the left hand of the equation will reduce the value of b_{13} and b_{23} since the values of r_{12} and r_{13} are constant.

BIBLIOGRAPHY

Abadie, Maurice. La défense des colonies. Paris, Charles Lavauzelle, 1937.

Abelson, R.P., and Tukey, J.W. "Efficient Conversion of Non-metric Information into Metric Information", Proceedings of the Social Statistics Section of the American Statistical Association, 1959, pp. 226-30.

_____. "Efficient Utilization of Non-Numerical Information in Quantitative Analysis", Annals of Mathematical Statistics, 34 (1963), pp. 1347-69.

Abrahamsson, Bengt, and Kaplan, Steven. Social Recruitment of the Military: Worldwide Research Inventory. International Sociological Association, VIIth World Congress, Varna, 1970.

Addock, C.J. Factorial Analysis for Non-Mathematicians. Victoria, Melbourne University Press, 1954.

Adelman, Irma, and Morris, Cynthia T. Society Politics and Economic Development: a Quantitative Approach. Baltimore, Johns Hopkins University Press, 1967.

Afrifa, A.A. The Ghana Coup: 24th February 1966. London, Frank Cass. 1966.

Ainslie, R. The Press in Africa. London, V. Gollancz, 1966.

Alexander, H.T. African Tightrope: my Two Years as Nkrumah's Chief of Staff. Don Mill's, Burns and Mac Eachen, 1965.

Alexander, Robert J. "The Army in Politics" in H.E. Davis (ed.), Government and Politics in Latin America. New York, Ronald, 1955, pp. 147-66.

Alkama. "Influence du recrutement militaire sur les populations noires de l'Afrique", Renseignements coloniaux et documents publics par le comité de l'Afrique Française et le comité du Maroc, 46, 1 (1936), pp. 8-11.

Alker, Hayward, R. "Causal Inference and Political Analysis" in Joseph L. Bernd (ed.), Mathematical Applications in Political Science II. Dallas, Southern Methodist University Press, 1966, pp. 7-44.

_____. "Statistics and Politics: the Need for Causal Data Analysis" in S.M. Lipset (ed.), Politics and the Social Sciences. New York, Oxford University Press, 1969, pp. 244-314.

Allport, F.H. Institutional Behavior. Chapel Hill, N.C., University of Carolina Press, 1933.

Almond, Gabriel A. "Political Systems and Political Change", American Behavioral Scientist, 6, 6 (1963), pp. 3-10.

_____. "A Developmental Approach to Political Systems", World Politics, 17, 2 (1965), pp. 183-214.

_____, and Coleman, James (eds), The Politics of the Developing Areas. Princeton, Princeton University Press, 1960.

_____, and Verba, Sydney. The Civic Culture. Boston, Little, Brown, 1965.

American University. Area Handbook for Angola. Washington, D.C., U.S. Government Printing Office, 1967.

_____. Area Handbook for Ethiopia. Washington, D.C., U.S. Government Printing Office, 1964.

_____. Area Handbook for Ghana. Washington, D.C., U.S. Government Printing Office, 1962.

_____. Area Handbook for Guinea. Washington, D.C., U.S. Government Printing Office, 1961.

_____. Area Handbook for the Ivory Coast. Washington, D.C., U.S. Government Printing Office, 1962.

_____. Area Handbook for Kenya. Washington, D.C., U.S. Government Printing Office, 1967.

_____. Area Handbook for Liberia. Washington, D.C., U.S. Government Printing Office, 1964.

_____. Area Handbook for Mozambique. Washington, D.C., U.S. Government Printing Office, 1969.

_____. Area Handbook for Nigeria. Washington, D.C., U.S. Government Printing Office, 1964.

_____. Area Handbook for the Republic of the Congo (Leopoldville), Washington, D.C., U.S. Government Printing Office, 1962.

_____. Area Handbook for Senegal. Washington, D.C., U.S. Government Printing Office, 1963.

_____. Area Handbook for Sudan. Washington, D.C., U.S. Government Printing Office, 1964.

_____. Area Handbook for Tanzania. Washington, D.C., U.S. Government Printing Office, 1968.

_____. Area Handbook for Uganda. Washington, D.C., U.S. Government Printing Office, 1968.

_____. Area Handbook for Zambia. Washington, D.C., U.S. Government Printing Office, 1968.

Amin, S. L'économie du Maghreb. Paris, Editions de Minuit, 1966.

_____. Le développement du capitalisme en Côte d'Ivoire. Paris, Editions de Minuit, 1967.

_____. Le monde des affaires sénégalaises. Paris, Editions de Minuit, 1969.

Ancier, Pierre. L'armée d'Afrique et la loi des cadres. Paris, n.p. , 1911.

Anderson, Charles W., Von Der Mehden, Fred, R., and Young, Crawford. Issues of Political Development. Englewood Cliffs, N.J., Prentice-Hall, 1967.

Anderson, N.H. "Scales and Statistics: Parametric and Non-Parametric", Psychological Bulletin, 58, 2 (1961, pp. 305-16.

Anderson, R.L. "Distribution of the Serial Correlation Coefficient", Annals of Mathematical Statistics, 13, 1 (1942), pp. 1-13.

Andreski, Stanislav. Military Organization and Society. London, Routledge and Kegan Paul, 1954.

_____. "Conservatism and Radicalism of the Military", Archives européennes de sociologie, 2, 1 (1961), pp. 53-62.

Ankrah, Joseph A. "Broadcast to the Nation" in P.E. Sigmund (ed.), The Ideologies of the Developing Nations. New York, Frederick A. Praeger, 1967, pp. 262-68.

Anon. "Armées d'Afrique francophone et constitution nationale", Revue française d'études politiques africaines, 14, 2 (1967), pp. 40-58.

_____. "Troupes coloniales: les contingents créoles", La Revue de Paris, 22.5 (1915), pp. 2242.

Antonelli, Etienne. L'Afrique et la paix de Versailles. Paris, Bernard Grasset, 1921.

Apithy, Sourou, Migam. Telle est la vérité. Paris, Présence Africaine, 1965.

Apter, David. Ghana in transition. New York, Atheneum Press, 1963.

_____. "Ghana" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 259-318.

_____. The Politics of Modernization. Chicago, University of Chicago Press, 1965.

_____. The Political Kingdom in Uganda: a Study in Bureaucratic Nationalism. Princeton, Princeton University Press, 1967.

_____. Some Conceptual Approaches to the Study of Modernization. Englewood-Cliffs, N.J., Prentice Hall, 1968.

_____. Choice and the Politics of Allocation. New Haven, Yale University Press, 1971.

Argyle, W.J. The Fon of Dahomey: a History and Ethnography of the Old Kingdom. Oxford, Clarendon Press, 1966.

Armitage, C.H., and Montanaro, A.F. The Ashanti Campaign of 1900. London, Sanas and Co., 1901.

Atmore, Anthony. "The Moorosi Rebellion: Lesotho 1879" in Robert I. Rotberg and Ali A. Mazrui (eds), Protest and Power in Black Africa. New York, Oxford University Press, 1970, pp. 3-37.

Austin, Denis G. "The Ghana Case" in University of London, Institute of Commonwealth Studies, The Politics of Demilitarization. London, University of London Press, 1966, pp. 41-55.

Aydalot, P. Essai sur les problèmes de la stratégie de l'industrialisation en économie sous-développée. Tunis, C.E.R.E.S., 1968.

Azan, Paul. L'armée indigène nord-africaine. Paris, Charles-Lavauzelle, 1925.

Badian, Seydou. Les dirigeants africains face à leur peuple. Paris, François Maspero, 1964.

Baggaley, Andrew. Intermediate Correlation Methods. New York, John Wiley, 1964.

Balandier, Georges. Les implications sociales du développement économique. Paris, Presses Universitaires de France, 1962.

Baran, Paul A. The Political Economy of Growth. New York, Monthly Review Press, 1957.

Barnard, Chester. The Functions of the Executive. Cambridge, Mass., Harvard University Press, 1938.

Barrows, W.I. "La politique de l'armée en Sierra Leone", Revue française d'études politiques africaines, 36, 12 (1968), pp. 54-64.

Bartlett, H. Moyse. The King's African Rifles. Aldershot, Gale and Polden, 1956.

Basquel, V., and Delmont, D. Le livre d'or de l'effort colonial français pendant la grande guerre. Paris, [n.p.], 1922.

Bassoul, René. "L'analyse mathématique des faits sociaux de Raymond Boudon", Revue française de sociologie, 8, 3 (1967), pp. 367-402.

Battersby, H.F.P. Richard Cornfield of Somaliland. London, Edward Arnold, 1914.

Bates, M. "Environment", International Encyclopedia of the Social Sciences, New York, Macmillan, 1968, pp. 91-3.

Beaudza, Louis. La formation de l'armée coloniale. Paris, Imprimerie-librairie militaire universelle L. Fournier et Cie, 1937.

Bechtold, Peter K. "The Military in Sudanese Politics", Africa Today, (May, 1965), pp. 23-25.

_____. Renewed Intervention by the Military in Sudanese Politics. Annual Meeting of the Middle East Studies Association of North America, Toronto, 1969.

Bediako, K.A. The Downfall of Kwame Nkrumah. Accra, K.A. Bediako, 1966.

Beeckmans, René. "Le service civique rural en Côte d'Ivoire et au Ghana", Congo-Afrique, 8, 28 (1968), pp. 391-400.

Beer, George L. African Questions at the Paris Peace Conference. London, Dawsons of Pall Mall, 1968.

Bell, M.J.V. Army and Nation in Sub-Saharan Africa. London, Institute for Strategic Studies, 1965a.

_____. Military Assistance to Independent African States. London, Institute of Strategic Studies, 1965b.

_____. "The Military in the New States of Africa" in Jacques Van Doorn (ed.), Armed Forces and Society: Sociological Essays. Mouton, Paris, 1968, pp. 259-273.

Belgique, Chambre des Représentants. Rapport sur l'administration du Congo Belge. Bruxelles, [n.p.], 1951.

_____. Rapport sur l'administration du Congo Belge. Bruxelles, [n.p.], 1952.

Benoix, Reinhard. Nation-Building and Citizenship. New York, John Wiley, 1964.

Benot, Yves. "Centre-révolution au Ghana", Démocratie nouvelle, (March 1966), pp. 41-8, 95-6; (April, 1966), pp. 25-34.

_____. Idéologies des Indépendances africaines. Paris, François Maspero, 1969.

Berg, Elliot J., and Butler, Jeffrey. "Trade Unions" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 340-82.

Bernard, G. Ville africaine, famille urbaine. Les enseignants de Kinshasa. Paris, Mouton, 1968.

Von Bertalanffy, Ludwig. "General System Theory", General Systems, 1, 1 (1956), pp. 1-10.

Beeri, Elizer. Army Officers in Arab Politics and Society. New York, Frederick A. Praeger, 1969.

Beshir, Mohammed O. "The Sudan: a Military Surrender", Africa Report, 9, 11 (1964), pp. 3-7.

Bienen, Henry. "National Security in Tanganyika after the Mutiny", Transition, 4, 4 (1965), pp. 39-47.

_____. The Ruling Party in the African One-Party State: Tanu in Tanzania", Journal of Commonwealth Political Studies, 5, 3 (1966), pp. 214-30.

_____. "Public Order and the Military in Africa: Mutinies in Kenya, Uganda and Tanganyika" in Henry Bienen (ed.), The Military Intervenes Case Study in Political Development. New York, Russell Sage Foundation, 1968, pp. 35-69.

_____. "Foreign Policy, the Military, and Development: Military Assistance and Political Change in Africa" in Richard Butwell (ed.), Foreign Policy and the Developing Nation. Lexington, University of Kentucky Press, 1969, pp. 69-111.

Binder, A.M. "Considerations of the Place of Assumptions in Correlational Analysis", American Psychologist, 14 (1959), pp. 504-10.

Black, C.E. The Dynamics of Modernization; a Study in Comparative History. New York, Harper and Row, 1966.

Black, Max (ed.), The Social Theories of Talcott Parsons. Englewood Cliffs, N.J., Prentice Hall, 1961.

Blake, Donald E. The Measure and Impact of Regionalism in Canadian Voting Behaviour, Paper presented at the Annual Meeting of the Canadian Political Science Association, St. John's, Nfld., 1971.

Blalock, Hubert M. "Evaluating the Relative Importance of Variables", American Sociological Review, 36, 6 (1961a), pp. 866-74.

_____. "Correlation and Causality: the Multivariate Case", Social Forces, 39, 2 (1961b), pp. 246-51.

_____. "Four Variable Causal Models and Partial Correlations", American Journal of Sociology, 68, 2 (1962), pp. 182-94.

_____. "Correlated Independent Variables; the Problem of Multicollinearity", Social Forces, 42, 2 (1963), pp. 233-66.

_____. Causal Inferences in Non-Experimental Research. Chapel Hill, University of North Carolina Press, 1964.

_____. "Some Implications of Random Measurement Error for Causal Inferences", American Journal of Sociology, 71, 1 (1965a), pp. 37-47.

_____. "Theory Building and the Statistical Concept of Interaction", American Sociological Review, 30, 3 (1965b), pp. 374-80.

_____. "The Identification Problem and Theory Building: the Case of Status Inconsistency", American Sociological Review, 31, 1 (1966), pp. 52-61.

_____. "Causal Inferences, Closed Populations, and Measures of Association", American Political Science Review, 61, 1 (1967a), pp. 130-37.

_____. "Status Inconsistency, Social Mobility, Status Integration, and Structural Effects", American Sociological Review, 32, 6 (1967b), pp. 790-801.

_____. "Theory Building and Causal Inferences" in H.M. Blalock and A.B. Blalock (eds), Methodology in Social Research. New York, McGraw-Hill, 1968, pp. 155-99.

_____. Multiple Indicators and the Causal Approach to Measurement Error", American Journal of Sociology, 75, 2 (1969), pp. 264-72.

_____. "A Causal Approach to Non Random Measurement Errors", American Political Science Review, 64, 4 (1970a), pp. 1099-112.

_____. "Estimative Measurement Error Using Multiple Indicators and Several Points in Time", American Sociological Review, 35, 1 (1970b), pp. 101-11.

Blankstein, Nancy, and Moser, Larry (eds), Poles of the Military in Less Developed Countries, 1958-1964: a Selected Bibliography. Washington, D.C., Department of State, Bureau of Intelligence and Research, External Research Staff, 1964.

Blan, Peter. Exchange and Power in Social Life. New York, John Wiley, 1964.

_____. "Social Exchange", International Encyclopedia of the Social Sciences, New York, Macmillan, 1968, pp. 452-57.

_____, and Duncan, Otis D. The American Occupational Structure. New York, John Wiley, 1967.

_____, and Scott, R. Formal Organizations. San Francisco, Chandler Publishing Company, 1962.

Blaumol, W.J. Economic Dynamics. New York, Macmillan, 1959.

Borrow, Davis B. "Soldiers and the Nation State", American Academy of Political and Social Sciences, 358 (1965), pp. 65-76.

Boubon, Hama. Essai d'analyse de l'éducation africaine. Paris, Présence Africaine, 1968.

Boucabeille, Bernard P.L. Sur l'organisation des troupes coloniales. Paris, [n.p.], 1926.

Boudon, Raymond. "A Method of Linear Causal Analysis: Dependence Analysis", American Sociological Review, 30, 3 (1965).

_____. L'analyse mathématique des faits sociaux. Paris, Plon, 1967a.

_____. "Les relations causales, problèmes de définition et de vérification", Revue française de sociologie, 8, 3 (1967b), pp. 389-402.

_____. "A New Look at Correlation Analysis" in H.M. Blalock and A.B. Blalock (eds), Methodology in Social Research, New York, McGraw-Hill, 1968, pp. 199-233.

Bouhannan, P. African Homicide and Suicide. Princeton, Princeton University Press, 1960.

Bouldinez, Kenneth. Conflict and Defense. New York, Harper and Row, 1962.

Bouvaillon, H.E. Bernard. "Nigeria's War Effort", Journal of the Royal African Society, 39, 154 (1940), pp. 115-23.

Bourgoignie, G.E. "Information et développement économique", Actualité économique, 42, 4 (1967), pp. 835-54.

Bouriand, Capitaine. La campagne allemande contre les troupes noires. Paris, [n.p.], 1922.

Bourricaud, François. "Introduction" to Talcott Parsons, Eléments pour une sociologie de l'action. Paris, Plon, 1955, pp. 1-104.

Boussenot, Georges. La France d'outre-mer participe à la guerre. Paris, F. Alcan, 1916.

Boycott, A.F. The Elements of Imperial Defence. London, Gale and Polden, 1938.

Boyle, Richard P. "Causal Theory and Statistical Measures of Effect: a Convergence", American Sociological Review, 31, 6 (1966), pp. 843-51.

_____. "Path Analysis and Ordinal Data", American Journal of Sociology, 75, 4 (1970), pp. 461-80.

Brackenbury, Henry. The Ashanti War. London, William Blackwood and Sons, 1874.

Brice, Belmont. "The Nature and Role of the Military in Sub-Saharan Africa", African Forum. 2, 1 (1966), pp. 57-68.

Brown, Nelville, and Gutteridge, William F. The African Military Balance. London Institute for Strategic Studies, 1964.

Bruner, Edward M. "Cultural Transmission and Cultural Change", Southwestern Journal of Anthropology, 12, 1 (1956), pp. 191-99.

Brunschwig, Henri. L'avènement de l'Afrique noire du XIXième siècle à nos jours. Paris, Armand Colin, 1963.

Buchanan, N.S., and Ellis, H.S. Approaches to Economic Development. New York, Twentieth Century Fund, 1955.

Buell, Raymond L. The Native Problem in Africa. New York, Macmillan, 1928.

Bugnet, Charles. Mangin. Paris, Plon, 1937.

Bunge, Mario. Causality. Cambridge, Mass., Harvard University Press, 1959.

Burke, Fred G. Public Administration in Africa, the Legacy of Inherited Colonial Institutions, Maxwell Graduate School of Citizenship and Public Affairs, the Program of Eastern African Studies, Occasional Paper no. 36, Syracuse University, 1967.

Caillavet, Henri. "Pour une armée de métier de l'Union Française", Union Française et Parlement, 7, 11 (1955), pp. 9-10.

Caldwell, J.L. African Rural-Urban Migration. New York, Columbia University Press, 1969.

Campbell, D.T., and Fiske, S.W. "Convergent and Discriminant Validation by the Multi-Trait-Multi-Method Matrix", Psychology Bulletin, 56, 1 (1959), pp. 81-105.

_____, and Stanley, J.C. Experimental and Quasi-Experimental Designs for Research. Chicago, Rand-McNally, 1966.

de Carmoy, Guy. Les politiques étrangères de la France, 1944-1966. Paris, La Table Ronde, 1967.

Carlos, Serge. "Les cheminements de la causalité", Sociologie et sociétés, 2, 2 (1970), pp. 184-203.

Carroll, J.B. "The Nature of the Data or How to Choose a Correlation Coefficient", Psychometrika, 26, 3 (1961), pp. 347-72.

Cartright, John. "Shifting Forces in Sierra Leone", Africa Report, 13, 4 (1968), pp. 26-31.

Cazeneuve, J. "Niveau de culture et audition de la radio à Madagascar", Cahiers internationaux de sociologie, 14, 43 (1967), pp. 85-98.

Central African Federation. Annual Report, 1959. London, H.M.S.O., 1959.

Chailley, Marcel. "L'africanisation des cadres de l'armée", Centre de Hautes Etudes d'Administration Musulmane. No. 2670, [n.p.], [n.p.], 1961.

_____. "Le soldat africain", Centre de Hautes Etudes d'Administration Musulmane. [n.p.], no. 3701, 1961.

_____. Histoire de l'Afrique Occidentale Française, 1638-1959. Paris, Editions Berger-Levrault, 1968.

Challener, Richard D. The French Theory of the Nation in Arms, 1866-1939. New York, Russell and Russell, 1965.

Chantebout, Bernard. L'organisation générale de la défense nationale en France depuis la fin de la seconde guerre mondiale. Paris, R. Pichon et R. Durand-Auzras, 1967.

Chapoulie, J.M. "Un type d'explication en sociologie: les systèmes de variables en relations causales", Revue française de sociologie, 10, 3 (1969), pp. 333-51.

Charbonneau, Jean. On se bat sous l'équateur. Paris, Charles-Lavauzelle. 1933.

Chein, I. "The Environment as a Determinant of Behavior", Journal of Social Psychology, 39, 1 (1954), pp. 115-27.

Choucri, N., and North, R.C. "The Determinants of International Violence", Peace Research Society Papers, 12, 1 (1969), pp. 33-63.

Christ, Carl. Econometric Methods and Models. New York, John Wiley, 1966.

Cisse, D. Problèmes de la formation de l'épargne interne en Afrique occidentale. Paris, Présence Africaine, 1969.

Clark, Grover. The Balance Sheets of Imperialism. New York, Columbia University Press, 1936.

Chotfeiter, James. "African Military Forces", Military Review, 48, 5 (1968), pp. 23-32.

Cnudde, C.F., and McGrone, D.J. "The Linkage between Constituency Attitudes and Congressional Voting Behavior: a Causal Model", American Political Science Review, 60, 1 (1966), pp. 66-72.

Coleman, James. Models of Change and Response Uncertainty. Englewood-Cliffs, N.J., Prentice-Hall, 1964a.

_____. Introduction to Mathematical Sociology. New York, Free Press, 1964b.

_____. "The Mathematical Study of Change" in H. and A. Blalock (eds), Methodology in Social Research. New York, McGraw Hill, 1968, pp. 428-78.

_____. "The Development Syndrome: Differenciation-Equality-Capacity" in L. Binder et Al., Crises and Sequences in Political Development. Princeton, Princeton University Press, 1971, pp. 73-100.

_____, and Price, Belmont. "The Role of the Military in Sub-Saharan Africa" in J.J. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, Princeton University Press, 1962, pp. 359-407.

_____, and Rosberg jr., Carl G. (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964.

_____. "Conclusions" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 655-92.

Collins, John N. Foreign Conflict Behavior and Domestic Disorder in Africa , Unpublished Ph.D. Dissertation, Northwestern University, 1967.

Colson, Elizabeth. "African Society at the Time of the Scramble" in L.H. Gann and Peter Duignan (eds), Colonialism in Africa, 1870-1960. Vol. I, Cambridge, Cambridge University Press, 1969, pp. 27-66.

"Congo-Kinshasa: les conjurés de la Pentecôte", Bulletin de la Commission Internationale des Juristes, (December, 1966), pp. 58-71.

Cornevin, Robert. "De la Force Publique à l'Armée Nationale Congolaise", Revue française d'études politiques africaines, 14, 2 (1967), pp. 74-112.

_____. "Les militaires au Dohomey et au Togo", Revue française d'études politiques africaines, 36, 12 (1968), pp. 65-85.

Corpierre, Michel. "L'Afrique noire à l'heure des putschs", Preuves, 16, 184 (1966), pp. 43-55.

Costner, Herbert L. "Theory, Deduction, and Rules of Correspondence", American Journal of Sociology, 75, 2 (1969), pp. 245-64.

Coty, François. Sauvons nos colonies. Paris, Grasset, 1931.

Cowan, L. Gray. "The Military and African Politics", International Journal, 21, 3 (1966), pp. 289-98.

Coward, Robert. Military Technology in Developing Countries. Cambridge, Mass., Massachusetts Institute of Technology, 1964.

Creager, J.A., and Valentine, L.D. "Regression Analysis of Linear Composite Variance", Psychometrika, 27, 1 (1962), pp. 31-8.

Creek, Jones. The Labour Party and Colonial Policy. London, New Fabian Colonial Essays, 1959.

Cros, Charles. La parole est à M. Blaise Diagne, premier homme d'état africain. [n.p.], Charles Cros, 1961.

Crooks, J.J. Historical Records of the Royal African Crops at Sierra Leone, 1898-1928. Dublin, [n.p.], 1928.

Crowder, Michael. "Independence as a Goal in French West African Politics: 1944-60" in William H. Louis (ed.), French-Speaking Africa: the Search for Identity. New York, Walker and Company, 1965, pp. 15-41.

_____. West Africa under Colonial Rule. Evanston, North Western University Press, 1968.

_____ (ed.), West African Resistance. London, Hutchinson, 1971.

Curle, A. Educational Strategy for Developing Countries. London, Tavislock, 1963.

Curtis, R.F., and Jockson, E.F. "Multiple Indicators in Survey Research", American Journal of Sociology, 68, 2 (1962), pp. 195-204.

Cutright, Phillips. "National Political Development Measurement and Analysis", American Sociological Review, 28, 2 (1963), pp. 253-64.

_____. "Political Structure, Economic Development and National Social Security Programs", American Journal of Sociology, 70, 5 (1965), pp. 537-50.

_____. "Inequality: a Cross National Analysis", American Sociological Review, 32, 6 (1967), pp. 562-578.

Dacks, Gurston. A Statistical Exploration of Causal Factors of Military Political Activity in the Independent States of Sub-Saharan Africa , Unpublished Paper, Princeton University, Department of Politics, 1968.

Dahlstrom, E. "Exchange, Influence and Power" in T. Agersnap (ed.), Contributions to the Theory of Organizations. New York, Humanities Press, 1968, pp. 107-51.

Dane, Edmund. British Campaigns in Africa and the Pacific, 1914-1918. London, Hodder and Stoughton, 1919.

Danès, Louis. L'Organisation militaire des colonies. Pamiers, L. Narbonne, 1912.

Darlington, Charles F., Alice B. African Betrayal. New York, David McKay Co., 1968.

Darlington, R.B. "Multiple Regression in Psychological Research and Practise", Psychological Bulletin, 69, 3 (1968), pp. 161-82.

Davis, Shelby C. Reservoirs of Men: a History of the Black Troops of French West Africa. Genève, Chambéry-Imprimeries Réunies, 1934.

Debon, Lt. Colonel. De l'organisation de l'Armée coloniale. Paris [n.p.], 1912.

Decalo, Samuel. "The Politics of Instability in Dahomey", Genève-Afrique, 7, 2 (1965), pp. 5-32.

Degenne, Alain. "Problèmes d'identification et d'interprétation", Revue française de sociologie, 8, 3 (1967), pp. 385-88.

Delavignette, Robert. Freedom and authority in French West Africa. London, Oxford University Press, 1950.

Delorme, Robert Lee. "The Political Basis of Economic Development: Mexico, 1884-1911, a Case Study", Unpublished Ph.D. Thesis, University of Minesota, 1968.

"The Demobilization Process in British Africa", African Transcripts, 7, 1 (1946), pp. 31-2.

Dent, Martin I. "The Military and Politics: a Study of the Relations between the Army and the Political Process in Nigeria" in Kenneth Kirkwood (ed.), African Affairs. London, Oxford University Press, 1969, pp. 113-40.

Dethier, R. Les citadins katangais et leur jardin. Liège, Imprimerie Vaillant-Carmanne, 1961.

Deutsch, Karl W. "Social Mobilization and Political Development", American Political Science Review, 55, 3 (1961), pp. 493-514.

_____. "Nation Building and National Development: Some Issues for Political Research" in K.W. Deutsch and W. Roltz (eds), Nation-Building. New York, Atherton Press, 1966, pp. 1-16.

Diagné, Pathé. Pouvoir politique traditionnel en Afrique occidentale. Paris, Présence Africaine, 1967.

Dill, William. "Environment as an Influence on Managerial Autonomy", Administrative Science Quarterly, 2, 4 (1958), pp. 409-43.

_____. "The Impact of Environment in Organizational Development" in S. Mailick and E. Van Ness (eds), Concepts and Issues in Administrative Behavior. Englewood Cliffs, N.J., Prentice Hall, 1962, pp. 94-109.

Diop, Cheikh Anta. L'Afrique noire pré-coloniale. Paris, Présence Africaine, 1960.

Van Doorn, Jacques (ed.), Military Profession and Military Regimes. Paris, Mouton, 1969.

Downes, W.D. With the Nigerians in German East Africa. London, Methuen, 1919.

Draper, N.R., and Smith, H. Applied Regression Analysis. New York, John Wiley, 1966.

Dubert, Marthe. Nos sénégalais pendant la grande guerre. Paris, R. Féry, 1922.

Duboin, E. Causerie sur l'armée coloniale. Paris, L. Fournier, 1933.

Du Bois, Victor D. "Guinea" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 186-216.

_____. The Student-Government Conflict in the Ivory Coast. New York, American Universities Field Staff, 1965.

Dudley, B.J. "The Military in the New States of Africa", Nigerian Journal of Economic and Social Studies, 6, 4 (1964), pp. 351-61.

_____. "The Military and Politics in Nigeria: Some Reflections" in Jacques Van Doorn (ed.), Military Profession and Military Regimes. Paris, Mouton, 1969, pp. 203-19.

Duff, Ernest A., and McCamant, John F. "Measuring Social and Political Requirements for System Stability in Latin America", American Political Science Review, 62, 4 (1968), pp. 1125-44.

Dumont, René. L'Afrique noire est mal partie. Paris, Editions du Seuil, 1962.

Duncan, Otis D. "Path Analysis: Sociological Examples", American Journal of Sociology, 72, 1 (1966), pp. 1-16.

_____. "Contingencies in Constructing Causal Models" in E.F. Borgatta (ed.), Sociological Methodology, 1969, San Francisco, Jossey-Bass, 1969, pp. 74-112.

Dunnette, M.D., and Hoggatt, A.C. "Deriving a Composite Score from Several Measures of the Same Attribute", Journal of Educational Psychology, 21, 4 (1930), pp. 657-79.

Durbin, J., and Watson, G.S. "Testing for Serial Correlation in Least Squares Regression", Biometrika, 38, 1 (1951), pp. 159-77.

Duroselle, Jean-Baptiste, and Meyriat, Jean (eds), Les nouveaux états dans les relations internationales. Paris, Armand Colin, 1962.

Duverger, Maurice. Les partis politiques. Paris, Armand Colin, 1962

Easton, David. A Framework for Political Analysis. Englewood-Cliffs, N.J., Prentice Hall, 1965.

Edgerton, H.A., and Kolbe, L.C. "The Method of Minimum Variation for the Combination of Criteria", Psychometrika, 1, 3 (1936), pp. 183-88.

Edwards, A. Statistical Methods for the Behavioral Sciences. New York, HOH, Rinehart and Winston, 1954.

Eisenstadt, S.N. The Political Systems of Empires. New York, Free Press, 1963a.

_____. "Bureaucracy and Political Development" in J. LaPalombara (ed.), Bureaucracy and Political Development. Princeton, Princeton University Press, 1963b, pp. 96-110.

_____. "Initial Institutional Patterns of Political Modernization", Civilizations, 12 (1962), pp. 461-72; 13 (1963c), pp. 15-26.

_____. "Institutionalization and Change", American Sociological Review, 24, 2 (1964), pp. 235-47.

_____. Modernization: Protest and Change. Englewood-Cliffs, N.J., Prentice Hall, 1966.

Emery, F.E., and Trist, E.L. "The Causal Texture of Organizational Environments", Human Relations, 18, 1 (1965), pp. 21-31.

Etheredge, D.A. "The Role of Education in Economic Development: the Example of Zambia", Journal of Administration Overseas, 6, 4 (1967), pp. 229-36.

Etzioni, Amitai. "New Directions in the Study of Organizations and Society", Social Research, 27, 2 (1960), pp. 223-28.

_____. Modern Organizations. Englewood-Cliffs, N.J., Prentice Hall, 1964.

_____, and Etzioni, E. (eds), Social Change: Sources, Patterns and Consequences. New York, Basic Books, 1964.

Ezekiel, Mordecai, and Fox, Karl J. Methods of Correlation and Regression Analysis. New York, John Wiley, 1959.

Fane, R. "The Return of the Soldier", African Affairs, 43 (April, 1944), pp. 56-61.

Farrar, D.E., and Glauber, R.R. "Multicollinearity in Regression Analysis: the Problem Revisited", The Review of Economics and Statistics, 44, 1 (1967), pp. 1-15.

Farrell, James D. The Somali Army: a Time of Testing, Annual Meeting of the African Studies Association, New York, 1967.

Feirabend, Ivo K., and R.L. "Aggressive Behaviors Within Politics, 1948-1962: a Cross National Study", Journal of Conflict Resolution, 10, 2 (1966), pp. 249, 71.

Feit, Edward. "Military Coups and Political Development: Some Lessons From Ghana and Nigeria", World Politics, 20, 2 (1968), pp. 174-94.

_____. "Parallèle entre les régimes militaires d'Espagne et du Ghana", Revue française d'études politiques africaines, 38, 2 (1969a), pp. 24-40.

_____. "The Role of 'Iron Surgeons': Military Government in Spain and Ghana", Comparative Politics, 1, 4 (1969b), pp. 485-98.

Feldman, Arnold S., and Hurn, Christopher. "The Experience of Modernization", Sociometry, 29, 4 (1966), pp. 378-95.

Feldman-Högaasen, J. "Analyse de dépendance, régression et corrélation", Revue française de sociologie, 10, 3 (1969), pp. 318-32.

Fennesey, James. "The General Linear Model: a New Perspective on Some Familar Topics", American Journal of Sociology, 74, 1 (1968), pp. 1-27.

Ferradini, Capitaine. Essai sur la défense des colonies. Paris, Charles-Lavauzelle, 1905.

Finer, Samuel E. Man on Horseback. London, Pall Mall Press, 1962.

Fisher, F. The Identification Problem in Econometrics. New York, McGraw-Hill, 1966.

Fisher, Lynn, Morrison, Donald G., and Stevenson, H. Michael. Social Mobilization and Political Conflict , Mimeo, York University, Department of Political Science, 1964.

Fisk, Ruth. Power in Africa, New York, Random House, 1970.

Fitch, Bob, and Oppenheimer, Mary. Ghana: End of an Illusion. New York, Monthly Review Press, 1966.

Fitzgibbon, Russell H. "What Price Latin American Armies", Virginia Quarterly Review, 36, 4 (1960), pp. 517-33.

Flavigny, A. "Notes sur l'analyse de dépendance", Revue française de sociologie, 10, 3 (1969), pp. 352-62.

Foltz, William J. "Senegal" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and Natural Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 16-65.

_____. "Military Influences" in U. McKay (ed.), African Diplomacy. New York, Praeger, 1966, pp. 69-89.

Forbes, H.D., and Tufte, E.R. "A Note of Caution in Causal Modelling", American Political Science Review, 62, 4 (1965), pp. 1255-65.

La Force Publique de sa naissance à 1914. Bruxelles, Institut Royal Colonial belge, 1952.

Forehand, G.A.- and Gilmer, B. "Environmental Variation in Studies of Organizational Behavior", Psychological Bulletin, 62, 3 (1964), pp. 361-81.

Fortes, Meyer. "The Impact of the War on British West Africa", International Affairs, 21, 2 (1945), pp. 206-219.

Fortescue, John. The Empire and the Army. London, Cassell and Company, 1928.

Fossum, Egil. "Factors Influencing the Occurence of Military Coups d'Etat in Latin America", Journal of Peace Research, 3 (1967), pp. 228-57.

Fougeyrollas, Pierre. Modernisation des hommes; l'exemple du Sénégal. Paris, Flammarion, 1967a.

_____. Television and the Social Education of Women. Paris, Unesco, 1967b.

France, Ministère de la Guerre. Les armées françaises d'outre-mer. Editions Henri Jonquières, 1931.

France, Ministère de la Guerre. Les troupes coloniales. Paris, [n.p.], 1928.

Fried, Mouton H. "Warfare, Military Organization, and the Evolution of Society", Anthropologica, 3, 2 (1961), pp. 134-48.

Froelich, J.C. "L'armée au pouvoir en Afrique", Afrique et Asie, 72, 4 (1965), pp. 21-31.

"Gabon; Putsch or Coup d'Etat?", Africa Report; 9, 3 (1964), pp. 12-15.

Gaito, John. "Scale Classification and Statistics", Psychological Bulletin, 67, 2 (1960), pp. 277-78.

Gardner, Brian. The Story of the First World War in East Africa. London, Cassell, 1963.

Garson, G.D. Handbook of Political Science Methods. Boston, Holbrook Press, 1971.

Gaud, M. Les premières expériences de planification en Afrique noire. Paris, Edition Cujas, 1967.

Geary, William N.M. Nigeria under British Rule. London, Franck Cass, 1965.

Gelbach, Jessica N. Toward a Model of Interorganizational Behavior: Two Case Study in France, Unpublished Ph.D. Thesis, Yale University, 1971.

Gendebien, Paul-Henry. L'intervention des Nations-Unies au Congo, 1960-1964. Paris, Mouton, 1967.

Germani, Gino, and Silvert, Kalman. "Politics, Social Structure and Military Intervention in Latin America", Archives européennes de sociologie, 2, 1 (1961), pp. 62-82.

Gilmore, Robert L. Caudillism and Militarism in Venezuela. Athens, Ohio University Press, 1964.

Girardet, Raoul, et al. La crise militaire française, 1945-1962. Paris, Armand Colin, 1964.

Gitera, J. "L'enseignement au Congo et le développement national", Congo-Afrique, 7, 18 (1967), pp. 403-18.

Gluckman, Max. Custom and Conflict in Africa. Oxford, Blackwell, 1955.

Gorges, E. Howard. The Great War in West Africa. London, Hutchinson, 1929.

Gold, David. "Some Problems in Generalizing Aggregate Associations", American Behavioral Scientist, 8 (December, 1964), pp. 16-18.

Golderberg, A.S. "Discerning a Causal Pattern among Data on Voting Behavior", American Political Science Review, 60, 4 (1966), pp. 913-22.

_____. Topics in Regression Analysis. London, Collier-Macmillan, 1968.

_____, and Jochems, D.B. "Note on Stepwise Least Squares", Journal of the American Statistical Association, 56, 1 (1961), pp. 105-10.

Goldstein, Walter. The Dilemna of British Defense. Columbus, Ohio State University Press, 1966.

Gonidec, P.F. "Préface" in M.A. Glele, Naissance d'un état noir. Paris, R. Pichon et R. Duvand-Auzias, 1969, pp. I-XII.

Goody, Jack. "Consensus and Dissent in Ghana", Political Science Quarterly, 83, 3 (1968), pp. 337-353.

De la Gorce, Paul-Marie. The French Army. New York. George Braziller, 1963.

Gordon, Robert A. "Issues in Multiple Regression", American Journal of Sociology, 73, 5 (1965), pp. 592-616.

Gouldner, Alvin. Patterns of Industrial Bureaucracy. Glencoe, Ill., Free Press, 1954.

Goullet, Colonel. "Organisation militaire de l'Afrique équatoriale", L'Afrique française, 21, 1 (1911), pp. 21-26.

Granger, G.G. Pensée formelle et sciences de l'homme. Paris, Aubier, 1960.

Great Britain, Colonial Office. An Economic Survey of the Colonial Empire (1932). London, H.M.S.O., 1934.

_____. The British Territories in East and Central Africa, 1945-1950. London, H.M.S.O., 1950.

_____. Report on the West African Forces Conference, Lagos, April 20-24, 1953. London, H.M.S.O., 1954a.

_____. Nigeria 1952. London, H.M.S.O., 1954b.

_____. Dispatches on the Gold Coast Government's proposals for Constitutional Reform. London, H.M.S.O., 1954c.

_____. Report of a Commission of Inquiry into Disturbances in Zanzibar during June 1961. London, H.M.S.O., 1961a.

_____. Uganda: Report of the Constitutional Conference, 1961. London, H.M.S.O., 1961b.

_____. Report of the Kenya Constitutional Conference, 1962. London, H.M.S.O., 1962.

_____. Kenya: Independance Conference, 1963. London, H.M.S.O., 1963a.

_____. Kenya: Preparations for Independance. London, H.M.S.O., 1963b.

_____. Report of the Kenya Constitutional Conference, 1962. London, H.M.S.O., 1967.

_____. Secretary of State for Commonwealth Affairs, Exchange of Letters between the United Kingdom of Great Britain and Northern Ireland and the Government of Kenya Establishing a British Training Team in Kenya. London, H.M.S.O., 1968.

Greenfield, Richard. Ethiopia: a New Political History. New York, Frederick A. Praeger, 1965.

Greene, Fred. "Toward Understanding Military Coups", Africa Report, 11, 2 (1966), pp. 111-114.

Grimal, Henril. La décolonisation: 1819-1963. Paris, Armand Colin, 1965.

Grundy, Kenneth W. Conflicting Images of the Military in Africa. Nairobi, East African Publishing House, 1968a.

_____. "The Negative Image of Africa's Military", Review of Politics, 20, 4 (1968b), pp. 428-40.

_____. Guerilla Struggle in Africa: an Analysis and Preview. New York, Grossman Publishers, 1971.

Grusky, Oscar. "The Effects of Succession: a Comparative Study of Military and Business Organization" in M. Janowitz (ed.), The New Military: Changing Patterns of Organization. New York, John Wiley, 1964, pp. 83-119.

Guilford, J.P. Psychometric Methods. New York, McGraw-Hill, 1954.

_____. Fundamental Statistics in Psychology and Education. New York, McGraw-Hill, 1956.

Gurr, Ted R. "A Causal Model of Civil Strife: a Comparative Analysis Using Now Indices", American Political Science Review, 62, 4 (1968), pp. 1104-24.

_____. Why Men Rebel. Princeton, N.J., Princeton University Press, 1970.

_____, and Ruttenberg, Charles. The Conditions of Civil Violence: First Tests of a Causal Model. Princeton, N.J., Center for International Studies, 1967.

Gutkind, P.C.W. "La famille africaine et son adaptation à la vie urbaine", Diogène, 37 (1962), pp. 83-112.

_____. "African Urban Family Life and the Urban System", Journal of Asian and African Studies, 1, 1 (1966), pp. 35-42.

Gutteridge, William. Military Institutions and Power in the New States. London, Oxford University Press, 1962a.

_____. "The Place of the Armed Forces in Society in African States", Race, 4, 1 (1962b), pp. 22-33.

_____. "Military Elites in Ghana and Nigeria", African Forum, 2, 1 (1966), pp. 31-42.

_____. "The Political Role of African Armed Forces: The Impact of Foreign Military Assistance", African Affairs, 66, 263 (1967), pp. 93-104.

_____. The Military in African Politics. London, Methuen and Company, 1969.

Guttman, Louis. "The Basis for Scalogram Analysis" in S.A. Stouffer et al., Studies in Social Psychology in World War Two. vol. 4, Princeton, N.J., Princeton University Press, 1950, pp. 60-90.

Haas, Ernst B. Beyond the Nation-State: Functionalism and International Organization. Stanford, Stanford University Press, 1964.

Hammond, J.L. "The Industrial Revolution and Discontent", Economic History Review, 2, 2 (1960), pp. 215-28.

Hamon, Léo (ed.), Le rôle extra-militaire de l'armée dans le Tiers-Monde. Paris, Presses Universitaires de France, 1966.

A Handbook of German East Africa. New York, Negro University Press, 1969.

Hanna, W., and J.L. "The Integrative Role of Urban Africa's Middle Place and Middlemen", Civilizations, 17, 1-2 (1967), pp. 12-26.

Hanning, Hugh. The Peaceful Uses of Military Forces. New York, Praeger, 1967.

Hanotaux, Gabriel. Le Général Mangin. Paris, Plon-Nourrit, 1925.

Hargreaves, John D. "West African States and the European Conquest" in L.H. Gann and Peter Duignan (eds), Colonialism in Africa, 1870-1960. Cambridge, Cambridge University Press, 1969, pp. 199-220.

Hasan, Yusuf F. "The Sudanese Revolution of October 1964", Journal of Modern African Studies, 5, 4 (1967), pp. 491-509.

Haywood, A., and Clarke, F.A.S. The History of the Royal West Africa Frontier Force. Aldershot, Gale and Polden, 1964.

Hazzledine, George Douglas. The White Man in Nigeria. New York, Negro University Press, 1969.

Hebga, J.A. "Origines des armes africaines", Etudes congolaises, 12, 3 (1969), pp. 71-83.

Heerman, E.H., and Braskamp, L.A. (eds), Readings in Statistics for the Behavioral Sciences. Englewood-Cliffs, N.J., Prentice Hall, 1970.

Hegland, T.J., and Ny Lehn, B. "Adjustment of Work Organizations to Critical Environmental Factors", Acto Sociologica, 11, 1-2 (1968), pp. 21-54.

Hempstone, Smith. Rebels, Mercenaries and Dividends: the Katanga Story. New York, Frederick A. Praeger, 1962.

Hess, Robert L., and Loewenberg, Gerhard. "The Ethiopian No-party State; a Note on the Functions of Political Parties in Developing States", American Political Science Review, 58, 4 (1964), pp. 947-50.

Henssler, Robert. Yesterday's Rulers. Syracuse, Syracuse University Press, 1963.

Higgins, Benjamin. Economic Development. New York, W.W. Norton, 1959.

Hippolyte, Mirlande. "Coups d'états et régimes militaires d'Afrique", Revue française d'études politiques africaines, 36, 12 (1968), pp. 35-53.

Histoire et épopée des troupes coloniales. Paris, Les Presses Modernes, 1956.

Historique des troupes coloniales pendant la guerre de 1914-1918. Paris, Charles-Lavauzelle, 1922.

Hoare, Mike. Congo Mercenary. London, Robert Hale, 1967.

Hodge, Robert W., and Treiman, D.J. "Social Participation and Social Status", American Sociological Review, 33, 5 (1968), pp. 722-40.

Hodgkin, Thomas, and Morgenthan, Ruth Shachter. "Mali" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 216-59.

Hodgkin, Thomas. African Political Parties: an Introductory Guide. Baltimore, Johns Hopkins University Press, 1961.

Holt, Robert T., and Turner, John E. The Political Basis of Economic Development. Princeton, N.J., Van Nostrand, 1966.

Homans, B.R. "Social Behavior as Exchange", American Journal of Sociology, 63, 4 (1958), pp. 597-606.

Holzinger, K.I., and Harman, H.H. Factor Analysis. Chicago, The University of Chicago Press, 1941.

Honorin, Michel. La fin des mercenaires. Paris, Robert Laffont, 1968.

Hopkins, K. "Civil-Military Relations in Developing Countries", British Journal of Sociology, 17, 2 (1969), pp. 165-82.

Hopkins, Raymond F. "Aggregate Data and the Study of Political Development", Journal of Politics, 31, 1 (1969), pp. 71-95.

Horowitz, Irving Louis. Three Worlds of Development: the Theory and Practise of International Stratification. New York, Oxford University Press, 1966.

Horst, Paul. "Obtaining a Composite Measure from a Number of Different Measures of the Same Attribute", Psychometrika, 1, 3 (1936), pp. 53-60.

_____. Factor Analysis of Data Matrices. New York, HOH, Rinehart and Winston, 1965.

Hoselitz, B.F. Sociological Aspects of Economic Growth. Glencoe, Ill., Free Press, 1960a.

_____. "Theories of Stages of Economic Growth" in B.F. Hoselitz (ed.), Theories of Economic Growth. Glencoe, Ill., Free Press, 1960b, pp. 193-238.

_____, and Weiner, M. "Economic Development and Political Stability in India", Dissent, 8, 1 (1961), pp. 172-79.

Hoskyns, Catherine. The Congo Since Independence, January 1960 - December 1961. New York, Oxford University Press, 1961.

Hougon, G. "Les mécanismes criminologiques dans une société urbaine africaine", Revue internationale de criminologie et de police technique, 4, 21 (1967), pp. 271-92.

Howe, R.W. "Togo: Four Years of Military Rule", Africa Report, 12, 5 (1967), pp. 6-13.

Hughes, David R. "Coups and Military Assistance", Military Review, 47, 12 (1967), pp. 3-11.

Hugon, P. Analyse du sous-développement en Afrique Noire. L'exemple de l'économie du Cameroun. Paris, Presses Universitaires de France, 1968.

Hunter, Monica. Reaction to Conquest. London, Oxford University Press, 1961.

Huntington, Samuel. The Soldier and the State. New York, Vintage Books, 1957.

_____. Political Order in Changing Societies. New Haven, Yale University Press, 1968.

Hutton, G. Thinking about Organizations. Bath, Bath University Press, 1969.

Ikoku, Samuel. Le Ghana de Nkrumah. Paris, François Maspero, 1971.

Ilungo, A.R. "L'instabilité politique en Afrique", Congo-Afrique, 6, 1 (1966), pp. 6-12.

Inkeles, Alex. "The Modernization of Man" in M. Weiner (ed.), Modernization: The Dynamics of Growth. Washington D.C., Voice of America Forum Lectures, U.S. Information Agency, 1966, pp. 151-63.

_____. "A Commentary on 'Is Everyone Going Modern'", American Journal of Sociology, 75, 1 (1969a), pp. 146-51.

_____. "Making Men Modern: on the Causes and Consequences of Individual Change in Six Developing Countries", American Journal of Sociology, 75, 2 (1969b), pp. 208-26.

_____. "Participant Citizenship in Six Developing Countries", American Political Science Review, 53, 4 (1969c), pp. 1120-42.

_____. "The Fate of Personal Adjustment in the Process of Modernization", International Journal of Comparative Sociology, 11, 2 (1970), pp. 81-114.

Isambert, F.A. "Traduction mathématique et vérification de quelques systèmes de relations causales", Revue française de sociologie, 8, 3 (1967), pp. 364-84.

Ishida, Takeshi. "The Development of Interest Groups and the Pattern of Political Modernization in Japan" in R.E. Ward (ed.), Political Development in Modern Japan. Princeton, N.J., Princeton University Press, 1960, pp. 293-337.

Jackson, Robert D. "Resistance to the German Invasion of the Tanganyikan Coast, 1888-1891" in R.I. Rotberg and A.S. Mazrui (eds), Protest and Power in Black Africa. New York, Oxford University Press, 1970, pp. 37-80.

Jacobs, Walter D. The Political Role of the Military in Rhodesia, Paper Delivered at the 10th Annual Meeting of the African Studies Association, New York, 1967.

Janowitz, Morris. "Military Elites and the Study of War", Journal of Conflict Resolution, 1, 1 (1957), pp. 9-18.

_____. The Professional Soldier. Glencoe, Ill., Free Press, 1960.

_____. The Military in the Political Development of New Nations: an Essay in Comparative Analysis. Chicago, University of Chicago Press, 1964.

_____. "Armed Forces in Western Europe: Uniformity and Diversity", Archives européennes de sociologie, 6, 2 (1965), pp. 225-37.

_____. "Armed Forces and Society: World Perspective" in Jacques Van Doorn (ed.), Armed Forces and Society. Paris, Mouton, 1965, pp. 15-38.

_____. Military Organization, Chicago, Center for Social Organization Studies, Working Paper, no. 131, 1969.

_____, and Little, Roger. Basic Education and Youth Socialization in the Armed Forces, Chicago, Center for Social Organization Studies, Working Paper, no. 104, 1968.

_____. Sociology and the Military Establishment. New York, Russell Sage, 1969.

Janssens, E. J'étais le général Janssens. Bruxelles, Charles Dessart, 1961.

Johns, David H. Defence and Police Organization in East Africa, Paper Delivered at the East African Institute of Social Research Conference, 1964.

Johnston, J. Econometric Methods. New York, McGraw Hill, 1963.

Johnson, John J. "The Latin American Military as a Politically Competing Group in Transitional Society" in John J. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, N.J., Princeton University Press, 1962, pp. 91-131.

Jones, William I. The Keita Decade: Economics of the Coup, "Africa Report", 14, 3-4 (1969), pp. 23-27, 51-54.

Jordan, Robert S. Government and Power in West Africa. London, Faber and Faber, 1969.

Kabongo, André Ilunga. "L'instabilité en Afrique", Congo-Afrique, 6, 1 (1966), pp. 6-13.

Kabore, Gomkoudougou V. Organisation politique traditionnelle et évolution politique des mossis de Ouadadougou. Paris, C.N.R.S., 1966.

Kagame, Alexis. Le code des institutions politiques du Rwanda pré-colonial. Bruxelles, Institut Royal Colonial Belge, 1952.

Kahl, Joseph A. The Measurement of Modernism: a Study of Values in Brazil and Mexico. Austin, The University of Texas Press, 1966.

Kane, E.J. Economic Statistics and Econometrics. New York, Harper and Row, 1965.

Kaplan, Abraham. The Conduct of Inquiry. San Francisco, Chandler Publishing Co., 1964.

Katz, Daniel, and Kahn, Robert. The Social Psychology of Organizations. New York, Wiley, 1966.

Kelly, George Armstrong. Lost Soldiers: the French Army and Empire in Crisis, 1947-1962. Cambridge, Mass., M.I.T. Press, 1965.

Khan, Fazal Muqeem. The Story of the Pakistan Army. Karachi, Oxford University Press, 1963.

Kikassa, Francis, and Lokisso, André. "Services civiques de la jeunesse en Afrique", Congo-Afrique, 7, 14 (1967), pp. 178-90.

Kilner, P. "Military Government in Sudan: the Past Three Years", World Today, 18, 6 (1962), pp. 254-68.

Kilson, Martin. "Sierra Leone" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 90-132.

_____. Political Change in a West African State. Cambridge, Harvard University Press, 1966.

Kindleberger, Charles P. Economic Development. 2nd ed., New York, McGraw Hill, 1965.

King, E.J. Education and Social Change. Oxford, Pergamon Press, 1966.

King, Preston. "Les aspects militaires de l'unité africaine", Présence Africaine, 47, 3 (1967), pp. 92-123.

Kirk-Greene, A.H.M. "A Preliminary Note on New Sources for Nigerian Military History", Journal of the Historical Society of Nigeria, 3, 1 (1964), pp. 129-49.

Kirkman, W.P. Unscrambling an Empire. London, Chatto and Windus, 1966.

Kirkwood, Kenneth. Britain and Africa. London, Chatto and Windus, 1965.

Kitchen, Helen. "Filling the Togo Vacuum", Africa Report, 8, 2 (1963), pp. 7-10.

Kline, F.G., Kent, K., and Davis, D. "Problems in Causal Analysis of Aggregate Data with Applications to Political Instability" in J.V. Gillespie and B.A. Vesvold (eds), Macro-Quantitative Analysis. Beverly Hills, Calif., Sage Publications, 1970, pp. 251-83.

Kraus, Jon. "Ghana Without Nkrumah: the Men in Charge", Africa Report, 11, 4 (1966), pp. 16-20.

Krupp, S. Patterns in Organizational Analysis. New York, Holt, Rinehart and Winston, 1961.

Kyle, Keith. "Coup in Zanzibar", Africa Report, 9, 2 (1964), pp. 18-20.

Labovitz, Sanford. "Some Observations on Measurements and Statistics", Social Forces, 56, 1 (1967), pp. 151-60.

Lachenal, Georges. "Les coups d'état militaires en Afrique", Cahiers du Communisme, 42, 4 (1966), pp. 73-84.

Lacroix, J.L. Industrialisation au Congo; la transformation des structures économiques. Paris, Mouton, 1967.

Lanciney, Christian. Les héros sont affreux. Bruxelles, Charles Dessart, 1962.

Land, Kenneth C. "Principles of Path Analysis" in E.F. Borgatta (ed.), Sociological Methodology, 1969. San Francisco, Jossey-Bass, 1969, pp. 3-38.

Lang, Kurt. "Military Sociology: a Trend Report and Bibliography", Current Sociology, 13, 1 (1965).

Lantier, Jacques. L'Afrique déchirée: de l'anarchie à la dictature; de la magie à la technologie. Paris, Editions Planète, 1967.

_____. Le destin de l'Afrique. n.p. , Culture, art, loisir, 1968.

LaPalombara, Joseph (ed.), Bureaucracy and Political Development. Princeton, N.J., Princeton University Press, 1967.

_____, and Weiner, M. Political Parties and Political Development. Princeton, N.J., Princeton University Press, 1966.

Lasalle-Séré, R. Le recrutement de l'armée noire. Paris, Librairie moderne de Droit et de Jurisprudence, 1929.

Lassnell, Harold D. "The Garnison State", American Journal of Sociology, 46, 3 (1941), pp. 455-68.

Lawrence, P., and Lorsch, J. Organization and Environment. Homewood, Irwin, 1969.

Lawson, Richard. Strange Soldiering. London, Hodder and Stoughton, 1963.

League of Nations. Armements Year Book. Geneva, League of Nations 1926-1940/41.

Leblanc, M. Personalité de la femme katangaise. Louvain, Publications universitaires, 1960.

Lee, J.M. African Armies and Civil Order. New York, Frederick A. Praeger, 1969.

Lefebvre, Henri. Introduction à la modernité. Paris, Les Editions de Minuit, 1962.

Lefever, Ernest W. Spear and Scepter. Washington, D.C., Brookins Institute, 1971.

Legassick, Martin. "Firearms, Horses and Samorian Army Organization 1870-1898", Journal of African History, 7, 1 (1966), pp. 95-115.

Lemarchand, René. "Congo" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 560-596.

_____. "The Passing of Mwamiship in Burundi", Africa Report, 12, 1 (1967), pp. 14-24.

_____. "Dahomey: Coup Within a Coup", Africa Report, 13, 6 (1968a), pp. 46-55.

_____. "Revolutionary Phenomena in Stratified Societies: Rwanda and Zanzibar", Civilizations, 1 (1968b), pp. 16-49.

_____. Rwanda and Burundi. New York, Frederick A. Praeger, 1970.

Lerner, Daniel. The Passing of Traditional Society; Modernizing the Middle East. New York, Free Press, 1958.

_____, and Robinson, Richard. "Swords and Ploughshares: the Turkish Army as a Modernizing Force", World Politics, 12, 1 (1960), pp. 19-45.

Letwin, William. "Four Fallacies about Economic Development" in D.E. Novack and R. Lekachman (eds), Development and Society. New York, St Martin's Press, 1968, pp. 23-39.

Levine, Donald N. "The Military in Ethiopian Politics: Capabilities and Constraints" in Henry Bienen (ed.), The Military Intervenes: Case Studies in Political Development. New York, Russell Sage Foundation, 1968, pp. 5-35.

_____. Wax and Gold; Tradition and Innovation in Ethiopian Culture. Chicago, University of Chicago Press, 1965.

Levine, Robert A. "Political Socialization and Cultural Change" in C. Geertz (ed.), Old Societies and New States. New York, Free Press, 1963, pp. 280-303.

Levine, Sol, and White, Paul. "Exchange as a Conceptual Framework for the Study of Interorganizational Relationships", Administrative Science Quarterly, 6, 3 (1961), pp. 583-601.

Levine, Victor T. "The Course of Political Violence" in William H. Lewis (ed.), French-Speaking Africa: the Search for Identity. New York, Walker and Company, 1965a, pp. 78-79.

_____. "The Course of Political Violence" in William H. Lewis (ed.), The Course of Political Violence. New York, Walker and Company, 1965b, pp. 58-80.

_____. "The Coup in the Central African Republic", Africa Today, 4 (1968), pp. 12-14.

_____. "Independant Africa in Trouble", Africa Report, 12, 9 (1967), pp. 19-24.

Levy, Marion. Modernization and the Structure of Societies. Princeton, N.J., Princeton University Press, 1966.

Lewis, W.A. "L'éducation et le développement économique", Revue internationale de Sciences Sociales, 14, 4 (1962), pp. 737-54.

Lewis, W. Arthur. "Africa's Officers Take Command", The Reporter, 34, 6 (1966), pp. 33-6.

Leys, Colin. "Violence in Africa", Transition, 5, 2 (1965), pp. 17-21.

Li, C.C. "The Concept of Path Coefficient and its Impact on Population Genetics", Biometrics, 12, 1 (1956), pp. 190-210.

Liebenow, J. Gus. "The One-Party State in West Africa: its Strengths and Weaknesses in the Nation-Building Process" in William H. Lewis (ed.), French-Speaking Africa: the Search for Identity. New York, Walker and Company, 1965, pp. 45-58.

Van Lierde, Jan (ed.), La pensée politique de Patrice Lumumba. Paris, Présence Africaine, 1963.

Lieuwen, Edwin. "Militarism and Politics in Latin America" in John J. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, N.J., Princeton University Press, 1962, pp. 131-65.

Lipset, Seymour M. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy", American Political Science Review, 53, 1 (1959), pp. 69-105.

Lissak, Moshe. "Selected Litterature of Revolutions and Coups d'Etat in the Developing Nations" in M. Janowitz (ed.), The New Military. New York, John Wiley, 1964, pp. 339-63.

_____. "Modernization and Role Expansion of the Military in Developing Countries", Comparative Studies in Society and History, 9, 3 (1967), pp. 233-56.

Little, K. West African Urbanization. Cambridge, Cambridge University Press, 1965.

_____. Some Contemporary Trends in African Urbanization. Evanstan, Northwestern University Press, 1966.

_____. The Mende of Sierra Leone. London, Routledge and Kegan Paul, 1967.

Lloyd, Peter C. "Traditional Rulers" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 382-412.

_____ (ed.), The New Elites of Tropical Africa. London, Oxford University Press, 1966.

Lloyd-Jones, W. K.A.R.: Being an Unofficial Account of the Origin and Activities of the King's African Riffles. London, Arrowsmith, 1926.

Lofchie, Michael F. "Zanzibar" in J.S. Coleman and C.G. Rosberg (eds), Political Parties and National Integration in Tropical Africa. Berkeley, University of California Press, 1964, pp. 482-509.

_____. Zanzibar: Background to Revolution. Princeton, N.J., Princeton University Press, 1965.

_____. "Representative Government, Bureaucracy, and Political Development: the African Case", Journal of Developing Areas, 2, 1 (1967), pp. 37-55.

Loken, R.D. Manpower Development in Africa. New York, Frederick A. Praeger, 1969.

Low, A., and Prott, R. Buganda and British Overrule: Two Studies. London, Oxford University Press, 1960.

Lowrau, René. L'analyse institutionelle. Paris, Editions de Minuit, 1970.

Lucas, Charles (ed.), The Empire at War. Vol. IV, London, Oxford University Press, 1925.

Luckham, Alexander R. "The Nigerian Military: a Case Study in Institutional Breakdown", Unpublished Ph.D. Thesis, University of Chicago, 1969.

De Lusignan, Guy. French Speaking Africa Since Independence. London, Pall Mall Press, 1969.

Ly, Abdoulaye. Les mercenaires noirs. Paris, Présence Africaine, 1957.

Mabileau, A., and Meyriat, J. (eds), Décolonisation et régimes politiques en Afrique Noire. Paris, Armand Colin, 1967.

McCord, William. The Springtime of Freedom: Evolution of Developing Societies. New York, Oxford University Press, 1965.

McCrone, Donald J., and Cnudde, Charles F. "Toward a Communication Theory of Democratic Political Development: a Causal Model", American Political Science Review, 61, 1 (1967), pp. 72-80.

McIntyre, W.D. Colonies into Commonwealth. London, Blandford Press, 1966.

McLane, Charles B. "Soviet Doctrine and the Military Coups in Africa", International Journal, 21, 3 (1966), pp. 298-311.

Macmillan, Harold. Tides of Fortune, 1945-1955. New York, Harper and Row, 1969.

Makedonsky, Eric. "Les militaires au pouvoir à Kinshasa", Revue française d'études politiques africaines, 38, 2 (1969), pp. 41-62.

"Mali: le coup de Bamuko", Jeune Afrique, 412 (December 1, 1968), pp. 25-29.

"Mali: les nouveaux gouvernants", Jeune Afrique, 414 (December 15, 1968), pp. 32-34.

"Mali: les nouveaux maîtres s'expliquent", Jeune Afrique, 415 (December 22, 1968, pp. 26-27.

"Mali: une révolution pas comme les autres", Jeune Afrique, 354 (October 22, 1967), pp. 16-17.

Malinvaud, E. Méthodes statistiques de l'économétrie. Paris, Dunod, 1964.

Mangin, Charles. Troupes noires. Coulommiers, Brodard, 1909.

_____. La force noire. Paris, Hachette, 1910.

_____. La mission des troupes noires. Paris, Comité de l'Afrique Française, 1911.

Maniha, John, and Perrow, Charles. "The Reluctant Organization and the Aggressive Environment", Administrative Science Quarterly, 10, 2 (1965), pp. 238-57.

Mapp, Roberta Koplin. "The Political, Social and Economic Correlates of Military Intervention in Sub-Saharan African Politics", Paper Delivered at the 42nd Annual Meeting of the Canadian Political Science Association, Winnipeg 1970.

Maquet, Jacques. "The Kingdom of Ruanda" in Daryll Forke (ed.), African Worlds. London, Oxford University Press, 1954, pp. 164-90.

_____. The Premise of Inequality in Ruanda. London, Oxford University Press, 1961.

_____. Africanité traditionnelle et moderne. Paris, Présence Africaine, 1967.

Markovitz, Irving. "The Winter of Discountent", Africa Report, 11, 4 (1966), pp. 10-16.

_____. "Ghana: Ten Years After Independence: the Development of Technocracy Capitalism", Africa Today, 14, 3 (1967), pp. 6-12.

Martindale, Don. Institutions, Organizations and Mass Society. Boston, Houghton Mifflin, 1966.

Mathews, D.R., and Prothro, J.W. Negroes and the New Southern Politics. New York, Harcourt, Brace and World, 1966.

Mathews, Ronald. African Powder-Keg; Revolt and Discountent in Six Emergent Nations. London, Bodley Head, 1966.

Mazrui, Ali A. "On Heroes and Uhuru-Worship" in A.A. Mazrui, On Heroes and Uhuru-Worship: Essays on Independent Africa. London, Longmans, 1967, pp. 19-35

_____. "Thoughts on Assassination in Africa", Political Science Quarterly, 83, 1 (1968), pp. 40-59.

_____. "Anti-Militarism and Political Militancy in Tanzania" in Jacques Van Doorn (ed.), Military Profession and Military Regimes, Paris, Mouton, 1969a, pp. 219-41.

_____. Violence and Thought. New York, Humanities Press, 1969b.

_____. "Violent Contiguity and the Politics of Retribalization in Africa", Journal of International Affairs, 33, 1 (1969c), pp. 59-106.

_____, and Rothchild, Donald. "The Soldier and the State in East Africa: Some Theoretical Conclusions on the Army Mutinies of 1964", Western Political Quarterly, 20, 1 (1967), pp. 82-97.

Mboya, Tom. Freedom and After. Boston, Little, Brown, 1963.

Meister, A. L'Afrique peut-elle partir? Paris, Editions du Seuil, 1966a.

_____. Le développement économique de l'Afrique orientale. Paris, Presses Universitaires de France, 1966b.

Melkin, D. "The Economic and Social Setting of Military Take Overs in Africa?", Journal of Asian and African Studies, 3-4, 2 (1967), pp. 230-44.

Menard, Orville D. The Army and the Fifth Republic. Lincoln, Neb., University of Nebraska Press, 1967.

Mercadier, Maurice. L'armée noire anglaise en Afrique Occidentale. Paris, Charles Lavauzelle, 1913.

Merton, Robert. Social Theory and Social Structure. Glencoe, Ill., Free Press, 1957.

Middleton, J., and Tait, David (eds), Tribes Without Rulers. London, Routledge and Kegan Paul, 1958.

Miller, W.E., and Stokes, D.E. "Constituency Influence in Congress", American Political Science Review, 47, 1 (1963), pp. 45-56.

Miners, N.J. The Nigerian Army, 1956-1966. London, Methuen, 1971.

Mobutu, Joseph Désiré. Le Président Mobutu vous parle, 20 novembre 1965- 24 novembre 1966. Paris, Editions Grafica International, 1967.

Moberly, F.J. History of the Great War; Military Operations, Togoland and the Cameroons, 1914-1916. London, H.M.S.O., 1931.

Mobogunje, A.L. Yoruba Towns, Ibadan, Ibadan University Press, 1962.

Montgomery, Viscount. Memoirs, London, Collins, 1958.

Montgomery, John D., and Siffin, William J. (eds), Approaches to Development: Politics, Administration and Change. New York, McGraw Hill, 1966.

Moran, P.A.P. "Path Coefficients Reconsidered", Australian Journal of Statistics, 3, 1 (1961), pp. 87-93.

Moreau-Vauthier, Paul. Un chef: le Général Mangin, 1866-1925. Paris, Les Publications Coloniales, 1936.

Morgenthau, Ruth S. Political Parties in French-Speaking West Africa. Oxford, Clarendon Press, 1964.

Morrison, Donald G., et al. Black Africa: a Handbook for Comparative Analysis. New York, Free Press, 1971.

Mosley, Leonard. Duel for Kilimanjaro: an Account of the East African Campaign, 1914-1918. London, Weidenfeld and Nicolson, 1963.

Mueller, Siegfried. Les nouveaux mercenaires. Paris, Editions France-Empire, 1965.

Muller, Emmanuel. Les troupes du Katanga et les campagnes d'Afrique, 1914-1916. Bruxelles, Office de Publicité, 1937.

Murray, Roger. "Militarism in Africa", New Left Review, 38, 1 (1966), pp. 35-60.

Nagel, Ernest. The Structure of Science. New York, Harcourt, Brace and World, 1961.

Nasser, Gamal Abdel. The Philosophy of the Revolution. Buffalo, N.J., Smith, Keynes and Marshall, 1959.

Needler, Martin C. Latin American Politics in Perspective. New York, Van Nos Reihnold, 1963.

_____. "Political Development and Socio-Economic Development: the Case of Latin America", American Political Science Review, 62, 3 (1968), pp. 889-98.

Nemo, J.M. "The Military Side of the African Problems", Military Review, 40, 7 (1960), pp. 78-87.

Nesvold, Betty A. "Scalogram Analysis of Political Violence", Comparative Political Studies, 2, " (1969), pp. 172-94.

Newbury, C.W. "Military Intervention and Political Change in West Africa", Africa Quarterly, 7, 3 (1967), pp. 215-22.

Nigeria. Final Report of the Parliamentary Committee on the Nigerianization of the Federal Public Service. Lagos, Federal Government Printer, 1959.

_____. Draft Defense Agreement Between the Government of the United Kingdom of Great Britain and the Government of the Federation of Nigeria. Lagos, Federal Government Printer, 1960.

Nixon, Charles R. "An Analysis of Nigerian Government Expenditures Patterns 1950-1962" in Carl K. Eicher and Carl Liedholm (eds), Growth and Development of the Nigerian Economy. [n.p.], Michigan State University Press, 1970, pp. 86-119.

Nkrumah, Kwame. Dark Days in Ghana. New York, International Publishers, 1968.

Noll, Ned. Histoire de l'armée coloniale. Paris, Berger-Levrault, 1896.

Norris, R.C., and Hjelm. "Non-Normality and Product-Moment Correlation", Journal of Experimental Education, 29, 2 (1961), pp. 261-70.

Nowak, S. "Some Problems of Causal Interpretation of Statistical Relationships", Philosophy of Science, 27, 1 (1960), pp. 23-38.

Nun, José. "Amérique Latine: la crise hégémonique et le coup d'état militaire", Sociologie du travail, 9, 3 (1967), pp. 281-314.

_____. "A Latin American Phenomenon: the Middle Class Military Coup" in J. Petras and M. Zeitlin (eds), Latin America: Reform or Revolution: a Reader. New York, Fawcett Publications, 1968, pp. 145-86.

Nyerere, Julius. The Second Scramble. Daar es Salaam, Tanganyika Standard Limited, 1961.

Nyo, Georges. "L'effort militaire actuel", L'Armée d'Afrique, 4, (December 1927), pp. 479-86.

Oberschall, A. "Rising Expectations and Political Turmoil", Journal of Development Studies, 6, 1 (1969), pp. 5-22.

O'Connell, James. "The Inevitability", Journal of Modern African Studies, 5, 2 (1967), pp. 181-91.

Ocran, A.D. A Myth Is Broken: an Account of the Ghana Coup d'Etat of 24th February. 1966, London, Longmans and Green, 1968.

Ohonbamu, Obarogie. Nigeria: the Army and the People's Cause. Ibadan, African Education Press, 1966.

Okello, John. Revolution in Zanzibar. Nairobi, East African Publishing House, 1967.

Olivier, Capitaine. Histoire de l'armée coloniale. Paris, Berger-Levrault, 1896.

Olsen, Marvin E. "Multivariate Analysis of National Political Development", American Sociological Review, 33, 5 (1968), pp. 699-712.

Olson, Mancur. "Rapid Growth as a Destabilizing Force", Journal of Economic History, 23, 4 (1963), pp. 529-52.

Osei-Kofi, E. The Family and Social Change in Ghana. Goteborg, Goteborg University Press, 1967.

Özbudun, Ergun. The Role of the Military in Recent Turkish Politics. Cambridge, Mass., Harvard University Press, 1966.

Page, E.B., and Marcotte, D.R. "Non-Parametric Statistics", Review of Educational Research, 36, 3 (1966), pp. 517-28.

Pankshurst, Richard. An Introduction to the History of the Ethiopian Army. Addis Abeba, Imperial Air Force, 1967.

Parnes, H.S. Besoins scolaires et développement économique et social. Paris, O.C.D.E., 1962.

Parsons, Talcott. The Social System. Glencoe, Ill., Free Press, 1951.

_____. Essays in Sociological Theory. Glencoe, Ill., Free Press, 1954.

_____. "A Sociological Approach to the Theory of Organizations", Administrative Science Quarterly, 1, 1 (1956), pp. 63-85; 1, 2 (1956), pp. 225-39.

_____. "The Mental Hospital as a Type of Organization" in M. Greenblatt (ed.), The Patient and the Mental Hospital. Glencoe, Ill., Free Press, 1957, pp. 109-29.

_____. "Some Indredients of a General Theory of Formal Organization" in A. Halpin (ed.), Administrative Theory in Education. Chicago, University of Chicago Press, 1958, pp. 40-72.

_____, et al. Theories of Society. 2 vols., Glencoe, Ill., Free Press, 1961.

_____. "Some Reflections on the Place of Force in Social Process" in Harry Eckstein (ed.), Internal War: Problems and Approaches. New York, Free Press, 1964, pp. 33-71.

_____. Structure and Process in Modern Society. Glencoe, Ill., Free Press, 1970.

_____, and Shills E. Toward a General Theory of Action. Cambridge, Mass., Harvard University Press, 1952.

Pasquier, Georges. L'organisation des troupes indigènes en Afrique Occidentale Française. Paris, E. Larose, 1912.

Paulme, D. "Le guerrier: sa place dans une pensée africaine: hier et aujourd'hui", Journal de psychologie normale et pathologique, 57, 3 (1960), pp. 275-90.

Pelz, D.C., and Andrews, F.M. "Causal Priorities in Panel Study Data", American Sociological Review, 29, 6 (1964), pp. 836-48.

Père, Michel. "L'Afrique Occidentale en guerre", L'Afrique Française, 49, 8-9 (1939), pp. 240-45.

Peristiany, J.G. The Social Institutions of the Kipsigis. London, Routledge and Kegan Paul, 1939.

Perlmutter, Amos. "The Praetorian State and the Praetorian Army: Toward a Taxonomy of Civil-Military Relations in Developing Politics", Comparative Politics, 1, 3 (1969), pp. 382-405.

Perreau-Pradiev, Pierre. La guerre économique dans nos colonies. Paris, F. Alcan, 1916.

_____, and Besson, Maurice. L'effort colonial des alliés. Paris, Berger-Levreault, 1919.

Perrow, Charles. Organizational Analysis: A Sociological View. Belmont, Wadsworth Publishing, 1970.

Person, Yves. "Samori and Resistance to the French" in R.I. Rotberg and A.A. Mazrui (eds), Protest and Power in Black Africa. New York, Oxford University Press, 1970, pp. 80-113.

Du Picq, Ardant. "Le tirailleur sénégalais", L'armée d'Afrique. 4 (December, 1927), pp. 459-78.

Pinkney, Robert. Ghana under Military Rule 1966-1969. London, Methuen, 1972.

Pondy, Louis. "Organizational Conflict: Concepts and Models", Administrative Science Quarterly, 12, 2 (1967), pp. 296-321.

Post, K.W.J. "The Nigerian Case" in University of London, Institute of Commonwealth Studies, The Politics of Demilitarization, London, University of London Press, 1966, pp. 55-63.

Poulantzas, Nicos. Pouvoir politique et classes sociales. Paris, François Maspero, 1969.

Presthus, Robert. The Organizational Society. New York, Alfred Knopf, 1962.

Price, J.H. Political Institutions of West Africa. London, Hutchison Educational Books, 1967.

Price, Robert. "Military Officers and Political Leadership: the Ghanaian Case", Comparative Politics, 3, 3 (1971a), pp. 361-81.

_____. "A Theoretical Approach to Military Rule in New States: Reference Group Theory and the Ghanaian Case", World Politics, 23, 3 (1971b), pp. 399-431.

Pujo, Bernard. "South of the Sahara; Defense Problems in French Speaking Africa", Military Review, 46, 2 (1966), pp. 30-36.

Putnam, R.D. "Toward Explaining Military Intervention in Latin American Politics", World Politics, 19, 1 (1967), pp. 38-111.

Pye, Lucian W. "Armies in the Process of Political Modernization", Archives Européennes de Sociologie, 2, 1 (1961), pp. 82-93.

_____. Politics, Personality and Nation Building. New Haven, Yale University Press, 1962a.

_____. "The Army in Burmese Politics" in J.J. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, N.J., Princeton University Press, 1962b, pp. 231-53.

_____. Aspects of Political Development. Boston, Little, Brown and Company, 1966.

Ranger, T.O. "African Reactions to the Imposition of Colonial Rule in East and Central Africa" in L.H. Gann and Peter Duignan (eds), Colonialism in Africa, 1870-1960. Vol. 1, Cambridge, Cambridge University Press, 1969, pp. 293-324.

Ranis, Peter. "Modernity and Political Development in Five Latin American Countries", Studies in Comparative International Development, 4, 2 (1968-9).

Rapoport, David. Praetorianism: Government without Authority. New York, Institute of War and Peace Studies, Columbia University, 1961.

_____. "A Comparative Theory of Military and Political Types" in S.P. Huntington (ed.), Changing Patterns of Military Politics. New York, Free Press, 1962, pp. 71-101.

_____. "Military and Civil Societies: the Contemporary Significance of a Traditional Subject in Political Theory", Political Studies, 12, 1 (1964), pp. 178-201.

Ratcliffe, A.L. "Politico-Military Problems of Africa", Military Review, 42, 5 (1962), pp. 54-62.

Read, Margaret. The Ngoni of Nyasaland. London, Oxford University Press, 1956.

Reise, David H. "Problems in Path Analysis and Causal Inference" in E.F. Borgatta (ed.), Sociological Methodology, 1969. San Francisco, Jossey-Bass, 1969, pp. 38-74.

République Centre Africaine. Programme des activités globales pour l'année 1961. Bangui, Service d'Information de la R.C.A., 1961.

"Le recrutement des troupes noires", La Revue de Paris, 17, 1 (1915), pp. 511-31.

Regelsperger, Gustave. Nos grandes colonies et la guerre. Paris, [n.p.], 1916.

"Le réservoir des troupes noires", La Revue de Paris, 19, 3 (1912), pp. 613-34.

Rhodesia and Nyasaland. Annual Report of the Secretary for Defense and the Chief of the General Staff. Salisbury, Government Printer, 1957.

Rice, A.K. The Entreprise and its Environment. London, Tavistock Publications, 1963.

Richards, A.I. "Multi-Tribalism in African Urban Areas", Civilizations, 16, 3 (1966), pp. 254-364.

Ridker, R.G. "Discountent and Economic Growth", Economic Development and Cultural Change, 11, 1 (1962), pp. 1-16.

Riggs, Fred N. "The Theory of Developing Politics", World Politics, 16, 1 (1963), pp. 147-73.

_____. "Bureaucrats and Political Development: a Paradoxical View" in J. LaPalombara (ed.), Bureaucracy and Political Development. Princeton, N.J., Princeton University Press, 1963, pp. 111-35.

_____. Administration in Developing Countries: the Theory of Prismatic Society. Boston, Houghton Mifflin, 1964.

_____. "The Structures of Government and Administrative Reform" in Ralph Braibanti (ed.), Political and Administrative Development. Durham, N.C., Duke University Press, 1969, pp. 220-329.

Rivkin, A. "Arms for Africa", Foreign Affairs, 38, 1 (1959), pp. 84-94.

Roach, Penelope. Political Socialization in the New Nations of Africa. New York, Teachers College Press, 1967.

Rokkan, S. "Comparative Cross-National Research", International Social Science Bulletin, 7 (1955), pp. 622-41.

Roston, Walt W. The Stages of Economic Growth. Cambridge, Mass., Cambridge University Press, 1960.

Rotberg, Robert I., and Mazrui, Ali A. (eds), Protest and Power in Black Africa. New York, Oxford University Press, 1970.

Rothchild, Donald S. The Effects of Mobilization in British Africa. Pittsburg, Duquesne University Press, 1959.

Roux, Jean-Pierre. "Les troubles du Rwanda et du Burundi", Revue Française d'études politiques africaines, 39, 3 (1969), pp. 48-62.

Rubenson, Sven. "Adwa 1896: the Resounding Protest" in R.I. Rotberg and A.A. Mazrui (eds), Protest and Power in Black Africa. New York, Oxford University Press, 1970, pp. 113-45.

Ruff, George. "Adaptation under Extreme Environmental Conditions", Annals of the American Academy of Political and Social Science, 389 (1970), pp. 19-26.

Rummel, Rudolf. "Dimensions of Conflict Behavior within Nations, 1946-1959", Journal of Conflict Resolutions, 10, 1 (1964), pp. 41-64.

_____. Applied Factor Analysis. Evanston, Northwestern University Press, 1970.

Rustow, Dankwart A. A World of Nations: Problems of Political Modernization. Washington, D.C., Brookings Institute, 1967.

Said, Abdul A. The African Phenomenon. Boston, Allyn and Bacon, 1968.

Salcedo, Rodolfo Nacino. A Communication Model of Modernization, Unpublished Ph.D. Thesis, Michigan State University, 1968.

Sales, Arnaud. "L'entreprise et son environnement", Sociologie et Société, 2, 1 (1970), pp. 107-23.

Sangree, Walter H. Age, Prayer and Politics in Tiriki, Kenya. London, Oxford University Press, 1966.

Sarraut, Albert. Les possibilités de conflits entre l'Europe et les races de couleur et les conditions de paix. Paris, [n.p.], 1923.

Savage, I.R. "Non-Parametric Statistics", Journal of the American Statistical Association, 42, 3 (1957), pp. 331-44.

Sayeed, Knalid B. "The Role of the Military in Pakistan" in Jacques Van Doorn (ed.), Armed Forces and Society. Paris, Mouton, 1968, pp. 274-98.

Sawrey, W.L. "A Distinction between Exact and Approximate Non-Parametric Methods", Psychometrika, 23, 1 (1958), pp. 171-77.

Scalapino, Robert A. "Elections and Political Modernization in Prewar Japan" in R.E. Ward (ed.), Political Development in Modern Japan. Princeton, N.J., Princeton University Press, 1968, pp. 249-93.

Schleh, E.P. "Post War Careers of Ex. Servicemen in Ghana and Uganda", Journal of Modern African Studies, 6, 2 (1968), pp. 203-220.

Schmid, Peter. "Somalia's Instant Army", Reporter, 31 (1964), pp. 48-50.

Schneider, F.T. "Les trois Afriques et leurs armées", Revue Militaire générale, 3, 3 (1969), pp. 392-407.

Schneider, Peter R. and Anne L. "Social Mobilizations, Political Institutions, and Political Violence", Comparative Political Studies, 4, 1 (1971), pp. 69-90.

Schneyder, Philippe. "De Conakry à Léopoldville: les militaires à la rescousse", France-Eurafrique, 17 (1965), pp. 8-9.

_____. "Les armées africaines", Esprit, 35, 363 (1967), pp. 300-318.

De Schweinitz, jr. Karl. Industrialization and Democracy; Economic Necessities and Political Possibilities. Glencoe, Ill., Free Press, 1964.

Scott, John T. "Factor Analysis and Regression", Econometrica, 34, 3 (1966), pp. 552-62.

Selzmick, P. Leadership in Administration: A Sociological Interpretation. New York, Row, Peterson and Company, 1957.

_____. "Foundations of the Theory of Organizations" in A. Etzioni (ed.), Complex Organizations. New York, HOH, Rinehart and Winston, 1961.

Sewell, W.H., and Shah, V.P. "Social Class, Parental Encouragement and Educational Aspirations", American Journal of Sociology, 73, 5 (1968), pp. 559-72.

Sharma, B.S. "The Sudan" in University of London, Institute of London, Commonwealth Studies, The Politics of Demilitarization. 1966, pp. 32-41.

Shepard, R.N. "Metric Structures in Ordinal Data", Journal of Mathematical Psychology, 3, 2 (1966), pp. 287-315.

Skunnik, W.A.E. "Dahomey, the End of a Military Regime", Africa Today, 4 (1968), pp. 21-22.

Schumpeter, Joseph. Capitalism, Socialism and Democracy. New York, Harper and Row, 1950.

Shepperd, jr., George W. "Seven Days that Shook the Sudan", Africa Today, 11, 10 (1964), pp. 10-14.

Sherrill, Kenneth S. "The Attitudes of Modernity", Comparative Politics, 1, 2 (1969), pp. 184-210.

Shils, Edward. "The Military in the Political Development of the New States" in J.J. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, N.J., Princeton University Press, 1962a, pp. 7-69.

_____. Political Development in the New States. The Hague, Mouton, 1962b.

Siegel, P.M., and Hodge, R.W. "A Causal Approach to the Study of Measurement Error" in H.M. Blalock and A.B. Blalock (eds), Methodology in Social Research. New York, McGraw Hill, 1968, pp. 28-60.

Siegel, Sidney. "A Method for Obtaining an Ordered Metric Scale", Psychometrika, 21 (1956a), pp. 207-16.

_____. Non Parametric Statistics for the Behavioral Sciences. New York, McGraw Hill, 1956b.

Sierra Leone. Report of the Commission of Inquiry into the Strike and Riots in Freetown, Sierra Leone, During February 1965. Freetown, Government Printing Department, 1955.

Sik, Endre. Histoire de l'Afrique Noire. 2 vols, Budapest, Akadémiai Kiadó, 1968.

Sills, David. The Volunteers. Glencoe, Ill., Free Press, 1957.

Silvert, K.H. Expectant Peoples: Nationalism and Development. New York, Random House, 1964.

Simon, Herbert A. "Causal Ordering and Identifiability" in W.C. Hood and T.C. Koopmans (eds), Studies in Econometric Method. New York, John Wiley, 1953, pp. 49-74.

_____. "Spurious Correlation: a Causal Interpretation", Journal of the American Statistical Association, 51, 3 (1954), pp. 467-79.

_____. Models of Man. New York, John Wiley, 1957.

_____. Administrative Behavior. 2nd ed., New York, Macmillan, 1958.

Sinai, I. Robert. The Challenge of Modernization: the West Impact on the Non-Western World. New York, W.W. Norton and Company, 1964.

Singh, Rajendra. Organization and Administration in the Indian Army. London, Gale and Polden, 1952.

Sklar, Richard L. Nigerian Political Parties. Princeton, N.J., Princeton University Press, 1963.

Skurnik, W.A.E. "The Military and Politics: Dahomey and Upper Volta" in Claude E. Welch (ed.), Soldier and State in Africa. Evanston Northwestern, University Press, 1970, pp. 62-124.

Smith, Arthur D. "Socio-Economic Development and Political Democracy: a Causal Analysis", Midwest Journal of Political Science, 13, 1 (1968), pp. 95-125.

Snow, Peter. "A Scalogram Analysis of Political Development", American Behavioral Scientist, 9, 7 (1966), pp. 33-36.

Snyder, Francis G. "The Keita Decade: an Era Ends in Mali", Africa Report, 14, 3-4 (1969), pp. 23-27., pp. 51-54.

Snyder, Richard. "A Decision-Making Approach to the Study of Political Phenomena" in R. Young (ed.), Approaches to the Study of Politics. Evanston, Northwestern University Press, 1958, pp. 3-38.

Snyder, William P. The Politics of British Defence Policy. Columbus, Ohio State University Press, 1964.

Sondet, Louis. "Soldats noirs", Afrique française, 23, 7 (1913), pp. 269-75.

Southworth, Constant. The French Colonial Venture. London, P.S. King, 1931.

Spencer, Paul. The Samburu: a Study of Gerontocracy in a Nomadic Tribe. London, Routledge and Kegan Paul, 1965.

Spengler, Joseph J. "Economic Development: Political Preconditions and Political Consequences", Journal of Politics, 22, 3 (1960), pp. 387-416.

_____. "Theory, Ideology, Non-Economic Values, and Politico-Economic Development" in R.J.D. Braibanti and J.J. Spengler (eds), Tradition, Values and Socio-Economic Development. Durham, N.C., Duke University Press, 1961.

Spillman, Colonel. "L'armée d'Afrique", Revue historique de l'armée, 4 (December, 1948), pp. 30-43.

Steiner, Kurt. "Popular Political Participation and Political Development in Japan: the Rural Level" in R.E. Ward (ed.), Political Development in Modern Japan. Princeton, N.J., Princeton University Press, 1968, pp. 213-49.

Stepan, Alfred. The Military in Politics: Changing Patterns in Brazil. Princeton, N.J., Princeton University Press, 1971.

Stevens, S.S. "On the Theory of Scales of Measurement", Science, 103 (June 7, 1946), pp. 677-80.

_____. "Measurement Statistics and the Schemapiric View", Science, 161, (August 30, 1968), pp. 849-56.

Stevenson, Charles S. "African Armed Forces", Military Review, 47, 3 (1967), pp. 18-23.

Stouffer, Samuel, et al. The American Soldier. Princeton, N.J., Princeton University Press, 1949.

Strotz, R.H., and Wold, H. "Recursive Versus Nonrecursive Systems: an Attempt at Synthesis", Econometrica, 28, 3 (1960), pp. 417-27.

Suits, Daniel. "Use of Dummy Variables in Regression Equations", Journal of American Statistical Association, 25, 4 (1957), pp. 548-51.

Suret-Canale, Jean. Afrique noire; l'ère coloniale, 1900-1945. Paris, Editions Sociales, 1964.

_____. "The End of Chieftaincy in Guinea", Journal of African History, 7, 3 (1966), pp. 459-93.

Tagiuri, R., and Litwin, G.H. (eds), Organizational Climate. Cambridge, Mass., Harvard University Press, 1968.

Tandom, Yash. "Military Coups and Inter-African Diplomacy", Africa Quarterly, 6, 4 (1967), pp. 278-85.

Tanter, Raymond. "Toward a Theory of Political Development", Midwest Journal of Political Science, 11, 2 (1967), pp. 147-73.

Taylor, S. Conceptions of Institutions and the Theory of Knowledge. New York, Bookman Associates, 1956.

Terrebery, Shirley. "The Evolution of Organizational Environment", American Sociological Quarterly, 12, 4 (1967), pp. 590-614.

Terray, Emmanuel. "Les révolutions congolaise et dahoméenne de 1963: essai d'interprétation", Revue française de Science Politique, 14, 5 (1964), pp. 917-42.

Theil, H. "Specification Errors and the Estimation of Economic Relationships", Review of the International Institute of Statistics, 25, 1 (1957), pp. 41-51.

_____, and Magar, A.L. "Testing the Independence of Regression Disturbances", Journal of the American Statistical Association, 56, 4 (1961), pp. 793-806.

Thiam, Doudov. La politique étrangère des états africains. Paris, Presses Universitaires de France, 1963.

Thibaut, J.W., and Kelley, H.H. The Social Psychology of Groups. New York, John Wiley, 1959.

Thiebaut-Schneider, Fernand. L'armée face au pouvoir. Paris, Editions France-Empire, 1968.

Thompson, James. "Organizations and Output Transactions", American Journal of Sociology, 68, 3 (1962), pp. 309-24.

_____. Organizations in Action. New York, McGraw Hill, 1967.

_____, and McEwen, William. "Organizational Goals and Environments: Goal-Setting as an Interaction Process", American Sociological Review, 23, 1 (1958), pp. 23-31.

Thompson, Victor. Modern Organization. New York, Alfred Knopf, 1961.

Thompson, Virginia, and Adloff, Richard. The Emerging States of French Equatorial Africa. Stanford, Stanford University Press, 1960.

Thompson, A.A., and Middleton, Dorothy. Lugard in Africa. London, Robert Hale Limited, 1959.

Tiger, Lionel. "Nkrumah's Ghana and the Theory of Charism", Bulletin of African Studies in Canada, 2 (1964), pp. 2-11.

Tintner, Gerhard. Econometrics. New York, John Wiley, 1959, pp. 102-14.

Tixier, G. "Les Coups d'états militaires en Afrique de l'ouest", Revue de droit public et de la science politique, 82, 6 (1966), pp. 1116-132.

_____. "Les gouvernements militaires en Afrique Noire", Revue Juridique et Politique, 21, 4 (1967), pp. 559-76.

Touré, Sekou. L'Afrique et la révolution. Paris, Présence Africaine, 1967.

Trimberger, E.K. "Rebellion, Fission and the Political System in Primitive African States", Anthropology Tomorrow, 10, 1 (1964), pp. 15-36.

Trinquier, Roger, Duchemin, Jacques, and Le Bailly, Jacques. Notre guerre au Katanga. Paris, Editions de la pensée moderne, 1963.

Les troupes coloniales pendant la guerre 1914-1918. Paris, Imprimerie Nationale, 1931.

Tsantis, Andreas C. "Political Factors in Economic Development", Comparative Politics, 2, 1 (1969), pp. 63-79.

Touraine, Alain. Sociologie de l'action. Paris, Editions du Seuil, 1965.

_____. La société post-industrielle. Paris, Gonthier, 1969.

Tufte, E.R. "Improving Data Analysis in Political Science", World Politics, 21, 4 (1969), pp. 641-54.

Tukey, J.W. "Causation, Regression and Path Analysis" in O. Kempthorne et al., Statistics and Mathematics in Biology. Ames, Iowa State College Press, 1954.

Turner, M.E., and Stevens, C.D. "Are Regression Analysis of Causal Paths", Biometrics, 14, 2 (1959), pp. 236-58.

_____, and Stevens, C.D. "Regression Analysis of Causal Paths", Biometrics, 5, 15 (1959), pp. 236-58.

Uganda. Report of the Commission of Inquiry into Disturbances in the Eastern Province, 1960. Entebbe, Government Printer, 1961.

"L'utilisation des troupes noires", La Revue de Paris, 24, 6 (1917), pp. 872-94.

"The Uganda Army: Nexus of Power", Africa Report, 11, 9 (1966), pp. 37-40.

Valluy, J.E. La première guerre mondiale. Paris, Larousse, 1968.

Van Den Berghe, P.L. (ed.), Africa, Social Problems of Change and Conflicts. San Francisco, Chandler, 1965.

_____. "The Military and Political Change in Africa" in Claude E. Welch (ed.), Soldier and State in Africa. Evanston, Northwestern University Press, 1970, pp. 252-67.

Van Der Eycken, H., and Van Der Vorst, P. "Le blocage de la croissance en République Démocratique du Congo", Tiers Monde, 8, 30 (1967), pp. 411-34.

Vandycke, Robert. "Les appareils militaires dans les formations sociales dépendantes d'Amérique Latine", Sociologie et sociétés, 3, 2 (1972), pp. 175-89.

Vanisina, Jan. Kingdoms of the Savanna. Madison, University of Wisconsin Press, 1966.

Vellas, P. Moyens sociaux du développement économique. Paris, Presses Universitaires de France, 1965.

Verhaegen, P. L'urbanisation de l'Afrique Noire. Bruxelles, C.E.D.E.S.A., 1962.

_____. "L'Armée Nationale Congolaise", Etudes Congolaises, 10, 3 (1967), pp. 1-31.

Vieyra, C. "L'éducation civique et politique", Confluent, 14 (1961), pp. 14-21.

_____. "Au Mali, révolution dans la révolution", Jeune Afrique, 361 (December 10, 1967), pp. 12-14.

Vinat, B. Epargne, fiscalité, développement. Parcs, Armand Colin, 1968.

Vincent, J.F. Femmes africaines en milieu urbain. Paris, O.R.S.T.O.M., 1966.

Wallerstein, Immanuel. Africa: the Politics of Independence. New York, Random House, 1961.

_____. "Elites in French-Speaking West Africa: the Social Basis of Ideas", Journal of Modern African Studies, 3, 1 (1965), pp. 1-33.

_____. "The Decline of the Party in Single Party African States" in J. LaPalombara and M. Weiner (eds), Political Parties and Political Development. Princeton, N.J., Princeton University Press, 1966a, pp. 201-17.

_____ (ed.), Social Change: the Colonial Situation. New York, John Wiley, 1966b.

_____. "Class, Tribe and Party in West African Politics" in Seymour M. Lipset and Stein Rokhan (eds), Party Systems and Voter Alignments. New York, Free Press, 1967, pp. 497-519.

Waugh, Frederick V. "Factor Analysis: Some Basic Principles and Applications", Agricultural Economics Research, 14, 1 (1962), pp. 77-80.

Weber, Max. The Theory of Social and Economic Organizations. Glencoe, Ill., Free Press, 1957.

_____. The Protestant Ethnic and the Spirit of Capitalism. New York, Scribner, 1958.

Weiker, Walter F. The Turkish Revolution 1960-61: Aspects of Military Politics. Washington, D.C., The Brookings Institute, 1963.

Weiner, Myron (ed.), Modernization: the Dynamics of Growth. Washington, D.C., Voice of America Forum Lectures, U.S. Information Agency, 1966.

_____. "Political Participation: Crisis of the Political Process" in L. Binder et al., Crises and Sequences in Political Development. Princeton, N.J., Princeton University Press, 1971, pp. 159-204.

Weinstein, Brian. Gabon: Nation-Building on the Ogooué. Cambridge, Mass., M.I.T. Press, 1966a.

_____. Gabon: a "Coup Manqué", Paper Delivered at the 9th Annual Meeting of the African Studies Association, Bloomington, Indiana University, 1966b.

Weiss, Herbert. Political Protest in the Congo. Princeton, N.J., Princeton University Press, 1965.

Welch, Claude E. The African Military and Political Development. Paper Delivered at the 10th Annual Meeting of the African Studies Association, New York, Novembre, 1967a.

_____. "Soldier and State in Africa", Journal of Modern African Studies, 5, 3 (1967b), pp. 305-22.

_____ (ed.), Soldier and State in Africa. Evanston, Northwestern University Press, 1970.

_____. "The Roots and Implications of Military Intervention" in Claude E. Welch (ed.), Soldier and State in Africa. Evanston, Ill., Northwestern University Press, 1970, pp. 1-62.

Werts, Charles E. "Path Analysis: Testimonial of a proselyte", American Journal of Sociology, 73, 4 (1968), pp. 509-12.

West African Command. Notes for Officers Acting in Aid of the Civil Power for Dispersal of Unlawful Assemblies. Accra, Government Printer, 1954.

Wild, J.V. The Uganda Mutiny. London, Macmillan, 1954.

Wiley, D.E., and Wiley, J.A. "The Estimation of Measurement Error in Panel Data", American Sociological Review, 35, 1 (1970), pp. 112-17.

Willame, Jean-Claude. "Military Intervention in the Congo", Africa Report, 11, 8 (1966), pp. 41-46.

_____. "Congo-Kinshasa: General Mobutu and Two Political Generations" in Claude E. Welch (ed.), Soldier and State in Africa. Evanston, Northwestern University Press, 1970, pp. 124-154.

Williams, E.J. Regression Analysis. New York, John Wiley, 1959.

_____. "Linear Hypotheses. I. Regression", International Encyclopedia of the Social Sciences. New York, Macmillan, 1968, pp. 310-24.

Wills, A.J. An Introduction to the History of Central Africa. London, Oxford University Press, 1967.

Wilson, David A. "The Military in Thai Politics" in John I. Johnson (ed.), The Role of the Military in Underdeveloped Countries. Princeton, N.J., Princeton University Press, 1962, pp. 253-77.

Wilson, Monica. Good Company: a Study of Nyakyusa Age Villages. Boston, Beacon Press, 1951.

Winans, Edgar V. Shambala: the Constitution of a Traditional State. London, Routledge and Kegan Paul, 1962.

Winham, Gilbert. "Political Development and Lerner's Theory: Further Test of a Causal Model", American Political Science Review, 64, 3 (1970), pp. 810-19.

Wold, H., and Jureen, L. Demand Analysis. New York, John Wiley, 1953.

Wolin, S.S. "A Critique of Organizational Theories" in A. Etzioni (ed.), A Sociological Reader on Complex Organizations. 2nd ed., New York, Holt, Rinehart and Winston, 1969, pp. 133-49.

Wright, Sewell. "The Methods of Path Coefficients", Annals of Mathematical Statistics, 5, 5 (1934), pp. 161-215.

_____. "The Interpretation of Multivariate Systems" in O. Kempthorne et al. (eds), Statistics and Mathematics in Biology. Ames, Iowa State College Press, 1954, pp. 11-33.

_____. "Path Coefficients and Path Regressions: Alternative or Complementary Concepts?", Biometrics, 16, 2 (1960), pp. 189-202.

_____. "The Genetical Structure of Populations", Annals of Eugenics, 15, 3 (1951), pp. 323-54.

Yannopoulos, Tatiana. "Unité et diversité des partis politiques africains", Revue française d'études politiques africaines, 28 (1968), pp. 32-47.

Young, Crawford. Politics in the Congo. Princeton, N.J., Princeton University Press, 1965.

_____. "Political Systems Development" in J.N. Paden and E.W. Soja (eds), The African Experience. vol. 1, Evanston, Northwestern University Press, 1970, pp. 452-72.

Younger, Kenneth. The Public Service in New States. London, Oxford University Press, 1960.

Zolberg, Aristide. One Party Government in the Ivory Coast. Princeton N.J., Princeton University Press, 1964.

_____. Creating Political Order. Chicago, Rand McNally, 1966.

_____. "Patterns of National Integration", Journal of Modern African Studies, 5, 4 (1967), pp. 449-67.

_____. "The Structure of Political Conflict in the New States of Tropical Africa", American Political Science Review, 52, 1 (1968a), pp. 70-87.

_____. "Military Intervention in the New States of Tropical Africa: Elements of Comparative Analysis" in Henry Bienen (ed.), The Military Intervenes: Case Studies in Political Development. New York, Russell Sage Foundation, 1968b, pp. 71-98.

_____. One-Party Government in the Ivory Coast. Princeton, N.J., Princeton University Press, 1969a.

_____. "Military Rule and Political Development in Tropical Africa: a Preliminary Report" in Jacques Van Doorn (ed.), Military Profession and Military Regime. Paris, Mouton, 1969b, pp. 175-203.

_____. "Patterns of Nation-Building" in J.N. Paden and E.W. Soja (eds), The African Experience. vol. 1, Evanston, Northwestern University Press, 1970, pp. 434-52.