

Cultural and Political Foundations of Socio-economic Development in Africa and Asia

(2nd draft, do not quote)

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Cultural and Political foundations of Socio-Economic Development in Africa and Asia

PART I: INTRODUCTION

International development is characterised by increasing income disparities, between rich and poor countries as well as among the large number of developing countries. Unlike most cross-country comparisons, in this report we concentrate on the non-European world of Africa, Asia and Melanesia. In other words, we do not integrate developing and developed countries in a single empirical framework. If *differences in the "south"* – economic, social, political – are to be explained, research should concentrate upon developing countries. Until today, data banks and theory construction are mainly heavily biased in favour of the better documented rich countries.

This study offers first of all the theoretical conceptions and the empirical facts. Extensive discussions of controversial positions are not intended and would not be possible within the limited frame of this document. However, we present the latest results of a long-term research programme¹ which will be completed in two years time. Almost nothing of what is presented in this report has yet been published before.

The basic idea of our approach is quite simple. Often it was stated that modern development never marks a complete break with the past, contrary, it is an evolutionary process carrying on what has been there before. If we want to understand differences in development, we should explore effectively on the local and national preconditions. That was the starting position about ten years ago. In a first step, all available data from anthropological research was collected for the whole of Africa, Asia and Melanesia. The focus was not on exotic examples of alternative ways of life, but on the economic, the social and the political institutions of the societies during the first half of the 20th century. Altogether about 1500 cultural units were coded, representing more than 95 percent of the non-European world². In a second step, these data were aggregated at the national level. The resulting cultural indicators describe the cultural heritage of modern nation states. With this new data bank, it is possible to analyse in which areas and to what extent the performance in development is related with the cultural past. The results in this report provide evidence of the continuing importance of historically determined cultural differences.

Leaving the methodological questions aside, three leading questions remain of interest: How to define culture for the purpose of cross-cultural analysis? What cultural dimension enter the analysis? and does culture matter?

¹ We want to thank for the support (in chronological order) granted by the German Bundesministerium für Wirtschaftliche Zusammenarbeit; the Swiss National Foundation of Scientific Research (SNF); UNESCO Switzerland; University of Zurich; and UNITAR.

² The data are published in Müller et al. (1999) – see Annex 6.

It was soon realised that most of the conventional definitions of culture are not facilitating our work. Therefore we then developed our own concept. In our context of development, culture should focus on the institutionalised way by which basic *functions* of human life are guaranteed in a society. In all societies, whether agrarian or industrial, tribal or national, local or global, certain tasks like production, distribution between generations, internal and external security or socialisation have to be regulated in some way. Its regulations depend to a large extent on the structural complexity of technological and organisational means. Development actually deals mainly with the transformation of the structural instruments to perform the functional requirements of the society and their members. This raises the question which elements of the unique institutional configuration of each historical society can be maintained or must be changed in order to increase productivity and efficiency in intersocietal competition. Among other things, the analysis should produce an objective answer as to what extent development implies "westernisation". These are topics of our discussion in the chapters on culture. Looking for a concept which allows for empirical and cross-national testing, the definition, though abstract, has to be operational. And because nation building is a process during which local societies get integrated in a larger institutional order, the definition must be applicable to ethnic and national societies alike.

The dimensions describing the cultural heritage cover the three following areas: the structural complexity of societies, the kind of kinship systems of the local societies and the cultural homogeneity of nation states. Structural *complexity* measures the agro-technical efficiency and the socio-political differentiation of traditional societies. By way of maps and tables, we demonstrate the enormous differences in the cultural heritage of the African and Asian countries in this respect. As for the *kinship* systems, we have to remind that they form the basic institution regulating collective membership, social status, co-operation and exchange in stateless societies. Such societies differ particularly with respect to two dimensions: the extension and corporative organisation of kinship networks, but also with respect to the role of relatives of the fathers or mothers side in society. Such institutional differences have a bearing on the definition of gender role; they also have a strong effect on social development. What makes kinship systems particularly interesting is the fact that they are only weakly correlated with structural complexity. Hence these variables form an independent dimension of their own, or, in our terminology, an element of the cultural style. The third dimension – the cultural *homogeneity* of nation states, has somehow different in quality. It does not measure a quality of local cultural groups, but of nation states. The concept is often used as a control variable in cross-national research. Probably because our operationalisation goes further than conventional measures, the effects of cultural homogeneity, according to our calculations, are much stronger than has been found so far.

Two theoretical arguments deserve special attention. In measuring the theoretical dimensions of the social conditions before the onset of nation building and post-colonial development, the cultural indicators play the role of truly "independent" variables in cross-cultural analysis. By introducing variables from social anthropology into cross-national research, three different fields can be analysed:

a) Cultural traits of local societies towards the end of the colonial period; (b) policies and legal regulations of national governments after 1960; (c) socio-economic performance of developing countries. 1960 is defined as a starting point because of the large number of colonial societies that gained political independence by that time. Thus, we resume the rather speculative discussion concerning the influence of the "cultural heritage" or "social capital" on socio-economic development, testing the hypotheses through a systematic comparative analysis of 87 African, Asian and Melanesian countries. The second argument is that our approach is radically interdisciplinary, combining ethnological and political theories in an model

of socio-economic development. Furthermore, the indicators of socio-economic development not only capture economic success but also the quality of life in terms of human development.

Culture has become a major issue for at least two reasons: On the one hand, globalization is accompanied by a widening gap between rich and poor countries, and between rich and poor classes within countries. Thus cultural "diversity" (UNESCO 1996) is increasing, but more often than not it is a diversity of the negative type: The process of replacing the unique patchwork of well adapted cultural traditions has not resulted in a better culture – a more urban, educated, universalistic, open, just, democratic and ecologically sustainable one. On the contrary we can observe how increasing numbers of people are desperately creating "cultures of poverty" (O. Lewis) in response to the stressful material conditions in which they find themselves trapped. More wealthy sections of the world population perceive this kind of cultural creativity, not unrealistically, as a threat.

On the other hand, local responses to globalisation differ greatly. In this perspective, cultural processes first of all may appear as an outcome of historic precedences or, as we will call it, of the cultural heritage. In this view, culture contains the clue to understanding how development is shaped in different world regions, since the actual outcome always represents an amalgam of the local and the global. Therefore, the present report is based on three assumptions:

- First: The cultural past is shaping development significantly and to an empirically relevant extent.
- Second: Saying that the past influences present performance in development does not mean that certain societies are more "fit" for development than others, but that the dominant concept of development is too monopolistic. Instead of economically and politically suffocating competition in the production of more viable models, future development has to become multilinear.
- Third: The notion of "Creative Diversity" loses its positive connotation if it primarily reflects differential access to essential resources. Differences in access to resources and in deployment of power should not be legitimised by referring to cultural pluralism.

In our view, the empirical results of rigorous statistical tests presented in the Third part are fully supporting the assumptions outlined above.

PART II:

CULTURE IN TRADITIONAL SOCIETIES

1: *Conventional definitions of culture*

After looking at conventional definitions, we introduce our own concept of culture. A concept specifically designed for comparative analysis of development and cultural change in a heterogeneous global environment. Culture is then defined in differential terms as the particular *institutional configuration* of societies. It characterises social groups and their specific way to solve certain universal human problems. Finally, operational criteria of such differences are presented.

Our approach to culture can be summarised as follows: Culture is both, it makes humans unique in the biological world and makes them different in the social world. All cultures describe how human existence is dependent on functioning of social organisation. Culture has always been relevant in inter-societal competition; in the capitalist world system, it has become a decisive factor for development. Each culture, however, is unique in the configuration of its technical, organisational and symbolic institutions as well as its historical past. But instead of analysing the past in the present, we study the ethnographic past and treat it as a cultural baseline of modern development.

Following the argument that the institutional responses of society to external pressure depend on the level of technology, an important theoretical distinction is proposed: On the one hand, there are cultural elements which are linked to structural conditions and the evolutionary position of a society. Together they form what we call the core culture. On the other hand, there are cultural elements, which are independent from structural conditions and evolutionary positions. The latter characterise the cultural style of a society. It is postulated that this theoretical distinction allows for a better understanding of differences in economic development. Moreover, it also opens up the perspective of a multidimensional evolution in the future.

Besides our concept of culture, we present the geographical area of our study, discuss both the extent as well as the limitations of our operational definition of culture and describe the most important dimensions of the traditional social organisation which will be inserted into the cross-national analysis in order to explain differences in economic growth. This chapter prepares the ground for the subsequent quantitative empirical analysis.

Among social scientists, consensus about the content and meaning of culture has not yet been found. Cultural anthropologists, for example, use the term for whatever has been produced by human creativity, and is socially transmitted through learning processes (examples in Box 3.1). When Friedman (1994) speaks of generic culture, he refers to the universality of the human elaboration of symbols. Culture, in this approach, plays the role of a functional equivalence to biological drives. In quantitative social science, on the other hand, culture is often treated as representing the unexplained residuum of rigorous empirical analysis, an area of darkness beyond the reach of currently available scientific methodology. And when UNESCO is listing the cultural heritage of mankind, the focus is rather on spectacular witnesses of human ingenuity than manifestations of the informal "culture of poverty" in a shanty town.

The dominant approaches can be summarised in three broad groups:

(1) Most often, culture is defined as social norms and values, including religion, arts and other forms of socially shared symbolic meanings, as opposed to material-structural artefacts and socio-facts. The approach has the merits and the limitations inherent to all one-dimensional definitions on a high level of abstraction. It is inspired by a centuries-old controversy in European philosophy on the relationship between material and spiritual realms of human life. With a growing interest in cultural diversity in a globalising world, a more comparativist and empirical variant of the *culture as value* approach won ground. This sociological tendency towards operational definitions of values stimulates the study of empirical correlations between symbolic and structural properties of societies. In both, the philosophical and the sociological tradition, culture is limited to the symbolic and normative dimension.

Box 1.1: Cultural definitions in chronological order

"That complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society."

Tylor (1924)

"The sum total of knowledge, attitudes and habitual behaviour patterns shared and transmitted by the members of a particular society."

Ralph Linton (1940)

"Culture consists in patterned ways of thinking, feeling and reacting, required and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values."

Kluckhohn (1951)

"Culture as "transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior and the artefacts produced through behavior."

Kroeber and Parsons (1958)

"Each person may be described in three ways: the universal characteristics of the species; the sets of characteristics that define that person as a member of a series of groups; that persons's idiosyncratic characteristics. When we talk of traits which are neither universal nor idiosyncratic we often use the term "culture" to describe the collection of such traits, or of such behaviors, or of such values, or of such beliefs. In short, in this usage, each "Group" has its specific "culture". Culture is a way of summarizing the ways in which groups distinguish themselves from other groups"

Immanuel Wallerstein (1990)

"Homo sapiens is the creature who "makes sense". [...] Culture, in the anthropological view, is the meanings which people create, and which create people, as members of societies"

Ulf Hannerz (1992)

"A great deal of confusion arises in both academic and political discourse when culture in the humanistic sense is not distinguished from "culture" in its anthropological senses, notably culture as the total and distinctive way of life of a people or society. From the latter point of view it is meaningless to talk of "the relation between culture and the economy", since the economy is part of a people's culture"

Sahlins (in UNESCO 1996)

"[We] define culture in purely subjective terms as the values, attitudes, beliefs, orientations, and underlying assumptions prevalent among people in a society".

Huntington (2000)

"Culture is to a human collectivity what personality is to an individual. [...] Culture could be defined as the interactive aggregate of common characteristics that influence a human group's response to its environment. [...] In this book I treat culture as the collective programming of the mind that distinguishes the members of one group or category of people from another. [...] C]ulture in this sense includes values; systems of values are a core element of culture".

Hofstede (2001)

(2) According to another common notion, culture characterises the totality of a specific way of life of a group. This definition is usually reserved for societies (be it nations, ethnic or regional groups). Societies merit special consideration in the study of cultures because they are the most complete human groups that exist, reaching the highest level of self-sufficiency in relation to its environments (Talcott Parsons). Such groups usually differ not only in their institutionalised values, but also in terms of their production system, their social organisation or political order. Therefore, anthropologists often produce holistic descriptions of societies, intending to underline their uniqueness, non-comparability and non-reducibility. In this sense, they use culture in the plural, in which case the term becomes synonymous with society (e.g. "African cultures" would mean: African societies with their specific ways of life, meaning systems etc.). Holistic descriptions are the starting point for comparativists interested in statistical cross-cultural correlations of coded data. When these anthropologists (like Raoul Naroll, George Peter Murdock and many others) express interest in cultural configurations, they do it in view of formal models constructed from variables covering different aspects of the cultural system. This line of thought will be referred to in the following as the *systemic view of culture*.

(3) A third approach conceptualises culture as an individual mental reality. It is emanated in the members of a social group in form of knowledge, belief, ideals and other symbolic expressions. In this view, the *locus* of culture is the heart or mind of each and every individual, and the *content* of culture is the sum of the individually reconstructed meaning systems which is based on collective experience. In this view, individuals are not so much reflecting, but creating the cultural world. The essential point is that meanings are manufactured by the interaction of a mind with something "out there". Hence, culture appears as an individual reality, even if statistical analysis should detect different modal personalities in different societies.

In sum, culture may be the property of small groups or large aggregations. It is retained in the heads of individuals, stored in artefacts or recorded by means of specifically designed devices for information storage, such as oral traditions, stereotypical behaviour patterns, formal institutions or architectural constructions.

In addition to the three above mentioned approaches to culture – culture as collective values, social system, or individual construction of meaning –, the notion of "*Culture as refinement*" should also be mentioned here. Under this angle, culture appears as a twin of "civilisation", i.e. the sophisticated and viable elaboration of a material, social and normative order offering legitimate opportunities to realise human potentials for a substantial portion of society. The approach often tends toward an elitist equation of "civilisation" with "high culture", as opposed to the barbarian or primitive.

The different views are complementary to important aspects of our common understanding of culture, which they cover. Two aspects of culture, however, are definitely underrepresented in mainstream cultural analysis. First, most notions of culture, and most research elaborate the uniqueness of a culture. Therefore, they lack of theory and try to make generalisations out of single cases. This dilemma can only be overcome by cross-cultural comparative analysis (Whiting 1954, Cohen 1973). The second point focuses on the dynamic quality of culture. In the context of modernisation, embedding of human behaviour and social institutions not only occur in networks at the local, national or international level, but also in *time*. Therefore, to avoid the ellipsis of functionalist or culturalist explanations, studies of the transformation of cultural systems require a dynamic approach to historic references.

We therefore need a theoretical and methodological concept of culture which fits comparative analysis and the dimension of time.

2. *How culture is defined in this study*

For the purpose of the present study, we need a definition which, on one side, is sufficiently *abstract* in order to be applicable to societies of different evolutionary positions. On the other side, it must be *operational* so as to render cultural factors measurable and testable in cross-national analysis. Thirdly, the definition must be *systemic* in order to catch the interrelationships between different aspects of culture in the process of modernisation.

Definitions of culture try to catch what makes humans unique in the biological world and what makes them different in the social world. This statement, combining both an anthropological and a sociological dimension could be used as a further definition of culture. More important: it summarises the whole approach of this study, which aims at describing and explaining cultural differences among human groups within the common conditions of human existence. We are asking: What kind of societies existed world-wide at the time when Europeans began to conquer the world? How can the cultural heritage of the African and Asian countries be measured, and what are the cultural differences of these countries? What connections exist between the past and the present, between the institutional arrangements of the tribal and feudal societies of the past and the development of present-day nations? Such questions link the past to the present. Our units of analysis - traditional ethnic units and present-day nation-states - represent different horizons of historical time. They differ in their technical repertoire, their institutional arrangements and the corresponding way of life of their members.

This concept of culture is characterised by the following basic assumptions: First, culture is designated to whatever has been created and is socially transmitted through symbolising activities. Culture is human not because humans make culture, but because humans symbolise qualitatively more than other animals. Second, cultural reproduction is studied in terms of intergenerational knowledge transfer, and not on genetic coding. Therefore, culture is much more dynamic than biology. It can "mutate" completely within two or three generations. Third, culture is defined here as a collective phenomenon, and not a psychological one. It characterises all kinds of human groups. As such, the theoretical nexus of cultural analysis comes closer to the paradigms of social and historical sciences than of psychology. Fourth, we need to know what culture performs, and what it is needed for. For this end, culture must be understood in terms of structure and function. Structure consists of technical, organisational and normative elements. These elements perform societal or collective functions, such as production, distribution, security and so on. Fifth, by the term of institution we mean the specific historic arrangement to fulfil societal or collective functions with structural means at hand. Sixth, in a comparative perspective, culture may be defined as an *institutional configuration of a society*. The term configuration means that any society has a unique mix of institutions. On the basis of its institutions, however, each culture can be compared with others in a systematic way.

On the basis of these assumptions, we can develop a concept of culture that is comprehensive, and open to the historical as well as to the comparative perspective. Furthermore, our concept intends to shed light on the interdependencies between culture, economy and politics. Finally, the concept should be able to grasp the values and particularities of each culture without being normatively biased itself. This concept reads in the following five statements which are then explained in depth:

- (1) The cultural present includes the past;
- (2) Cultural diversity is diversity in fulfilling the same societal function;
- (3) Structural complexity is a decisive but ambivalent element of cultural evolution;
- (4) Cultural competition increases in the capitalist World system;
- (5) A cultural system consists of core and style.

2.1 The cultural present includes the past

All development, whether planned or unplanned, roots in the past. Even if the aims of planned social change are revolutionary, or the impacts of external forces cause ruptures in local life as is the case under colonial rule or under the impact of dominant market forces, the new emerging condition will still show the trace of history and the mentality of the people involved. The Chinese Revolution bears characteristics which the historian will recognise as typically Chinese, unthinkable in other societies. Or the way many African societies – not only governments – interpret and make use of the political institutions of the postcolonial state reflect traditional socio-political patterns as well as their distortions during the colonial era.

Such observations have been aptly described as history of the *longue durée* by Braudel (1958) or within a framework of "dialectical modernisation theories" (Martinussen 1997). In an excellent analysis on the principles of social evolution, Hallpike (1986) states that Chinese and Indo-European history exposes basic institutional and ideological principles inherited from a remote and primitive antiquity. These principles are often of vital significance both in the definition of the various challenges societies encounter, and in their response to these challenges. The solution for the same problem can often be brought about by more than one functionally equivalent strategy. Which strategy actually will be followed depends, among other things, on the particular cultural tradition that has been inherited from the past.

A few examples from different areas may help to clarify the point :

- As Dirks (in Jamieson 1996) noted with respect to conversions to Christianity in India, the bases for religious affiliation are to be founding in pre-existing political landscapes. As a general rule, the Christian message was most attractive for discriminated sections of the population. Not only were they attributed the status of children of god in the same way as any other human being, they also had privileged access to European education and hence to new job opportunities outside of traditional ascription.
- In many African countries, the legal situation is characterised by hybridisation and normative double standards. In daily life, the formal law of European origin coexists with locally embedded rules and sanctions. In a painstaking case study of Burundi's civil law, Weilenmann (1996) demonstrates that in spite of colonialism, military decrees and the authoritative modernity of state, African indigenous laws have not fallen into abeyance.
- Response to rising market opportunities are likely to vary from culture to culture. Chang (1991) discusses the process of early accumulation in Korea, insisting that people do not always create new norms to accommodate to the new situations, but often accommodate behaviour to existing norms. For instance, it takes values to decide in market transactions whether one should help others or leave them alone. In Korea, a deeply rooted tradition of collective self-help among farmers on the level of wards was transferred into modernising the artisan sector in the rural milieu. The same principle was even applied in the national school system and the entry exams to secondary school. In Korea there was no need for individualistic and competitive values in order to transform the traditional society. Increasing productivity and accumulation of capital was attained on the basis of a collective ideology and practice on local level, serving as a functional equivalent of liberal mobilisation in the West.
- In a historic analysis of the transformation of the African agrarian system under French colonial rule, Hecht (1984) argues that the model of lineage production is useful in understanding the social behaviour of incipient cocoa and coffee farmers in southern Ivory coast during 1920-1980. He exposes a wide range of pre-capitalist agrarian societies, especially in land surplus economies, where control over labour rather than land is crucial for production, and where a low level of technology limits the nature and scope of control

over persons and their material output. The author argues that the evolution of rural society in southern Ivory Coast was shaped by factors internal to the dynamics of the lineage configuration, including farm expansion and the intensification of labour, which imposed demands that could not be met by extended kin workers; and by external factors including government policies on public investment, cocoa and coffee marketing, land tenure and education. Even more than in the Korean case, the cultural heritage does not manifest in an unbroken continuity of past orders. But it seems to favour paths which under different cultural conditions would be unthinkable.

Any person who is familiar with the social reality in developing countries – and not only there – could easily add many other examples to the cultural "past in the present". This raises the question which aspects of institutionalised reality tend to "lag" (Ogburn 1964) behind. Comparative studies of cultural change in European history and of non-European societies under the impact of colonialism seem to reveal transformational rules that can be generalised. Laslett (1988), for instance, postulates characteristic orders of pace in social change of different spheres of cultural organisation. "Fast pace orders" like political institutions, can change over-night, whereas other spheres like productivity, family models or criteria of honour and shame change more slowly. This explains why at a specific place in a specific moment, social reality contains elements reflecting different time levels. In terms of Lenski/Nolans (1984:2) functional-evolutionary theory: "Change is a cumulative process in which earlier developments influence the course of later developments".

Since we expect that the cultural *heritage* of developing countries is responsible for differences in their economic performance, the focus of our attention is directed towards the social formations of the past, still living within the boundaries of present-day nation states, and their traditional cultural organisation. To the extent that these traditional units have been reduced to an informal status, their institutional arrangements have become informal too. This does not mean, however, that they have become meaningless! *As long as the institutions of the state are too weak, too unreliable and too particularistic in their public services, average people continue to fully depend on traditional networks and their social norms.* North (1990) is one of first in the growing number of economists who clearly realised the impact of such norms on economic performance. He distinguishes between formal and informal rules: Whereas the former are the rules embedded in constitutions, laws and contracts, the latter are driven by the specific culture of a society and consist of conventions, norms, traditions and coded behaviour. North (1990: 53) warns that "[l]ooking only at the formal rules ... gives us an inadequate and frequently misleading notion about the relationship between formal constraints and [economic] performance". The problem is that informal norms, by their very nature, seem to escape measuring and standardising. On our way to overcome this problem, mainly two methodological solutions had to be found. The first concerns the definition of the culture bearing unit, the second the step from the local to the national level.

2.2 Cultural diversity is diversity in fulfilling the same societal functions

We take it for granted that human individuals depend on relatively stable social groups which are organised at a level beyond the family. Therefore, all human societies dispose of institutional arrangement designed to secure a number of existential tasks. We illustrate and discuss them in the following five points:

- *Production and trade:* Institutions, formal or informal, regulate division of labour, determine revenue from production, trade or other sources to satisfy basic needs. Whether production is legally organised in communal, associational, private or state ownership or responsibility, is of secondary interest. As long as such organisational and legal differences can be treated as functional equivalences with no impact upon the economic

productivity, they only mark differences in cultural style. As an example, we may think of irrigation tanks in South Asia: They can be owned privately, by communes, or by the state. We have no knowledge whether the regime of ownership has a systematic effect on the efficiency of water use. All three forms are equally possible with irrigated agriculture. The critical point, from an evolutionary and development point of view is rather the output per land unit per year, than, the labour productivity. This is the figure which depends on structural elements like demographic density, political organisation or intensity of labour, to mention just a few.

- *Social distribution:* Institutions, formal or informal, regulate the sharing of products acquired by the economically active members to offer security to the dependent and vulnerable members of the society. They also regulate the relations and the degree of solidarity between relatives, between producers and consumers, the old and the young as well as the sexes. Distribution can be performed in many different ways, among kin or neighbours or beyond the local group; in kind or in cash or by labour exchange; within or across generations, on individual or on group basis, and so on. Most of these different forms are linked with the organisational level and the efficiency of the society. It is difficult to organise social solidarity at a higher institutional level if redistribution is based on labour exchange. Monetised economies alone, combined with modern bureaucracy, have the capacity to manage redistribution on a national (or even international) level. The institutional arrangements for social distribution have a bearing on productivity if lack of security prevents people from saving and/or investing. All too often, modernization opens up new opportunities to invest while at the same increasing the precariousness of life by weakening traditional social ties.
- *Collective security:* Institutions, formal or informal, provide for group integrity vis-à-vis internal or external threats by effective rules and procedures for sanctions of deviant behaviour and protection against foreign threats. With the integration into colonial and postcolonial states, the ethnic societies have lost their former collective autonomy. On the local level, conflict management was time consuming and in most cases a male affair. The raise of law enforcement and peace keeping (or the monopoly to war) from the local to the national level was probably one of the most labour saving single operations in the long history of mankind. In a more general perspective, the function of collective security has been moved from family to the state. This marks a qualitative change in structural complexity.
- *Socialization and knowledge production:* Institutions, formal or informal, regulate how the newly born generations acquire the necessary cognitive and normative knowledge and behaviour. In all societies there are certain forms of formal socialization transcending the frame of the family. Examples are ethnic initiation rites, temporary monastic education or the national and international education system. These different forms mark differences in cultural style and in structural complexity as well. More complex societies tend to extend and to professionalise the formal socialization process, moving it from the midst of the family, later even from religious organisations, to state control. What has been observed under collective security also applies in education: The lower the structural complexity or evolutionary position of a society, the more different types of formal and informal socialization exist. And the more educational systems are formalized the more similar they become in form and function. This is even true for the present world system, where the curricula of the national education systems are increasingly converging since the 50s and 60s of the last century (Cha 1991).
- *Religion:* In all societies institutions exist, formal or informal, which deal with collective interpretations of the existential and moral status of humans in the universe. Feudal

2.3 Structural complexity is a decisive but ambivalent element of cultural evolution

Structural complexity is just a cover word for the power potential of societies. On the one hand, technical and organisational tools are being developed *and* institutionalised in response to pressing needs. On the other hand, they result from strategic interests of social groups who tend to expand or maintain privileged or hegemonic positions. Examples are legions: *Agricultural intensification* has been, and continues to be an answer to demographic growth. The same time, dominant classes push towards increased agricultural output in order to extract surplus and promote non-agricultural activities. *Political centralization* responds to increasing settlement size and corresponding reduction of transaction costs. Simultaneously, centralization of decision taking mechanisms increases control over limited resources and hence the power of the elite. *Social differentiation* has been, and continues to be a consequence of division of labour. In this process, productivity increases and holds the promise of new choices, be it in terms of labour reduction, higher consumption or collective spending for whatever purpose. At the same time, labour division promotes social *stratification*. As such it turns out as an effective instrument of maximization of privileges for the powerful. Increasingly elaborated *knowledge systems* have to promote and safeguard the increasingly vulnerable structural complexity.

Increasing structural complexity has been the dominant long term trend over the last 10'000 years, in which the overwhelming majority of the world population gradually shifted from hunter-gatherer populations in small migratory bands to sedentary agrarian societies organised in increasingly hierarchical political systems. Our own research, classifying 883 peoples from Africa and Asia in the period of colonisation in five categories of structural complexity, reveals a stunning picture: By that time already, about 78% to 90% of the population were members of stratified societies; only 2,5 % of the total population in Africa and Asia belonged to tribal societies with low structural complexity. As Exhibit 2-2 shows, this is true for all large geographical regions.

Since then, the process has accelerated. Nowadays mankind lives in approximately 200 political units of unheard-of internal stratification. The demographic imbalance, too, is reproduced in the international world since a large majority of to-days humanity lives in a handful of large states. This has to be kept in mind in a cross-national analysis.

**Exhibit 2-2: People living in societies of different structural complexity:
The case of the non-European world**

Level of structural complexity	Large cultural regions: Population in % and absolute number						
	Sub-Saharan Africa N = 510	Western Asia North Africa N = 92	South Asia N = 84	Southeast Asia N = 98	East Asia N = 23	Melanesia N=76	
5 = High	2,0 % 10,4 *	26,1 % 238,5	20,2 % 438,7	4,2 % 57,7	39,1 % 809,8	0	77,8 %
4	8,6 % 30,4	30,0 % 34,5	19,1 % 85,0	13,7 % 79,7	8,7 % 0,8	0	11,5 %
3	31,0 % 77,4	33,7 % 39,3	26,2 % 18,0	25,3 % 26,2	17,4 % 3,9	6,6 % 0,5	8,3 %
2	51,5 % 0,3	9,8 % 4,6	22,6 % 23,3	34,7 % 10,1	17,4 % 0,9	54,0 % 1,1	2,0 %
1 = Low	7,1 % 4,1	0	11,9 % 1,4	22,1 % 1,9	17,4 % 0,2	39,5 % 0,2	0,4 %

* Absolute number of persons in Millions.

What lies behind this impressive process? In the mainstream of literature, this impressive shift from primitive hunters to high civilisation is regarded as progress beneficial to all. And in fact, there are many reasons to see evolution of mankind in that way. However, we cannot share this view that is blind for the price that a large majority had to pay in this process. In fact, the entire phase of evolutionary development of agrarian society before industrialisation has not contributed to health, prolonged life expectancy, or facilitate life. Up to then, increasing agricultural productivity had not eased the workload of the producers – on the contrary: the proud history of growing civilization was paid by a gradual, but substantial prolongation of the work time. This prolongation was up to 100% -- that is from approx. 4 hours/day at the early days of agricultural production to about 8 hours/day in densely populated feudal societies with irrigated agriculture (Levine 1999, Minge-Klevana 1980). Before the industrial revolution and without industrially produced chemical fertilizers, increasing productivity per unit of land inevitably meant – and continues to mean for the large number of farmers with no access to credits today – increased labour input per unit of calorie. Apart from technical reasons for this rule, the increasing dependency of the farmers on feudal or bureaucratic lords intensified the drain of energy away from the farmers household. A deteriorating input/output relation for the overwhelming majority of the population has become the norm.

The ambivalent character of this evolutionary process is not only visible on the agro-technical dimension. It also characterises processes on the organisational and normative level. If the increase of structural complexity did not offer direct advantages for all people, the question is why it happened at all. An internal and an external reason have to be considered here. Internally, the process was in the interest of aristocratic elites, who were able to increase the extraction of economical surplus by the deployment of political power. Doing so, dominant classes often contributed substantial to the rationality and efficacy of the societal system as a whole. Moreover, the process of social stratification was accompanied by the great world religions, which provided the ideological foundation for deferred gratification patterns. Externally, this evolutionary process increased intersocietal competition, as the next section shows.

2.4 Cultural competition increases in the capitalist World system

Before the onset of the colonial conquest, the concrete historical societies were adapted to quite different natural and social environments. Only some of them developed institutional configurations which were particularly designed for, or inadvertently functional to inter-societal competition. Though cultural institutions at all times had to pass the test of selection and adaptation between and within societies, the modern situation is qualitatively different from what existed before. In the extremely competitive environment of the capitalist world system, leading to extreme power differentials on a global scale and with an increasing population density, intersocietal competition has become endemic. Aggressive potentials which were a specific feature of a few societies in the past has become a decisive selective factor of cultural survival.

At this point the concept of structural complexity in the organisation of societies becomes important in a comparative perspective. Structural complexity stands for institutional arrangements which are relevant not only for internal surplus extraction, but also for external deployment of power. In inter-societal competition, in the past as well as today, human groups either had to defend their autonomy, move away or adapt to dominant neighbours. The consequences of falling short in this respect becomes apparent if societies get externally marginalized and suffer from internal disintegration as well as of the loss of positive cultural identity. In the worst case, they get ethnically extinct by complete assimilation or physical

elimination as happen to large parts of the American Indians, or to many ethnic groups in the process of colonisation and postcolonial integration of modern nation states (Diamond 1997). In analogy to bio-diversity, we may speculate that the 19th century constituted the peak of global cultural diversity. The accelerated diversification of cultural identities does not compensate for increasingly homogenous structural conditions in globalisation. Today, the question whether or not the members of a society are able to reproduce as members of a *specific* society depends largely on the rules which are governing the world system and which are affecting all societies.

2.5 A Cultural system consists of core and style

The term institution is used in a broad sense here, denoting any kind of habitual practise in a society. Whether or not and to what extent particular institutions are of functional relevance for the evolution or competitive survival of a system, is an empirical question. We will come back to the point in our empirical analysis. In principle, however, any single function can be supported by different institutions. The function of "production", for example, is supported not only by "economic institutions", but by political, social or moral institutions as well. The same applies to any other basic societal function. Therefore, we do not talk of economic or other institutions, but of respective functions. In addition, we said that culture embraces everything that has been created and is socially transmitted through symbolising activities. Whether instrumental or not, and instrumental in whatever sense, does not make part of the abstract definition. Yet in the long-term cultural evolution, and in modern development, certain traits are clearly more relevant than others for the collective chances in inter-societal competition, because they are fully or partly relevant for the basic functions of the society, according to the level of structural complexity. The more institutional forms vary with structural complexity, the higher their structural content. Therefore we suggest to distinguish, between institutions which bear on a society's capacities in inter-societal competition. This subset of institutions that are fully or partly relevant with respect to basic societal functions represent what will be called "*core culture*" in the following³. All other institutional arrangements, on the other hand, represent what we call "*cultural style*". Core culture and cultural style together define the *institutional configuration* of society. Each society is unique in its specific cultural configuration. If we define the single elements of culture in an universal way, however, all societies can be compared to each other with regard to these elements. This is exactly what our concept of culture is able to do.

In cross-cultural research, the institutional arrangements are normally grouped with conventional headings like (1) economic organisation, (2) political organisation, (3) social organisation and (4) normative structure (religion, myths, art styles and so on).

3 Macro-history is a history of increasing structural complexity

In this chapter, we introduce the evolutionary concept of structural complexity. The basic message can be summarised as follows: There is no qualitative break between the past and the present. What today is called development looks like the last and accelerated phase of an age-long process of cultural differentiation. Later it will come out that the degree of the pre-colonial structural complexity is a strong predictor of modern economic growth. For this reason, the point merits careful consideration.

³ The terms are inspired by Julian Steward (1955), but defined slightly differently. Following his materialist orientation, he defines core culture as "...constellation of features which are most closely related to subsistence activities and economic arrangements". Our definition of core culture includes symbolic and value dimensions *as long* as they contribute to the legitimisation and reproduction of the structural organisation of a society.

From an anthropological point of view, the discussion in this chapter is rather basic. However, there is no purpose entering into academic controversies for their own sake. Our aim is to set the baseline of modern development along those dimensions which continue to influence the quantity and quality of cultural transformation in the non-European world.

3.1 Introduction

Human history is not an ideal area for sweeping theoretical generalisations. But it is safe to say that since about 10'000 years, human societies as a whole have steadily moved in one direction: They have become technically more sophisticated, economically more productive, politically more hierarchical, socially more stratified and legally more regulated. As long as we avoid normative judgments like more "progressed" and "humane" (Alfred Kroeber) more "decent" and "advanced" (Robert Redfield), more "rational" and "realistic" (Christopher Hallpike) – to mention just a few examples from the anthropological corner –, we do not believe that describing cultural history in structural terms is an expression of euro-centric and hegemonic thinking, as relativist anthropologists would criticise⁴. Identifying technology and an efficient state-organisation as "the hallmark of Western civilisation" and therefore rejecting it (Chick 1997) is not the position of this report. It is rather suggested that the more a social phenomenon is power related the less "cultural" it is – cultural in the sense of a purely optional element of life style and therefore open to relativistic interpretations. This exemplifies the difference between structural factors and the cultural style: The effect of a gun is transculturally understood, the reasons to burn or to bury the dead are not.

Structural complexity is probably the cultural dimension which is best accessible to empirical quantitative analysis. As was argued in the last chapter, development can be understood as an accelerated macro-historic and structural evolution. This does not imply, of course, the naive assumption that future history must continue in the same direction, or that humans are more happy today than they were in the past ⁵. For example, it is well known that many "simple" societies are more egalitarian in their treatment of women and of children than many "complex" societies. For such reason, evolution not necessarily means *human* development, but a process of growth and differentiation. The concept allows to amalgamate the interest in modern development with a structural and long term perspective.

⁴ "As Murdock (1973) says: "When anthropologists differentiate cultures in terms of their relative complexity, they do not use the term 'complex' in its ordinary, literal, or dictionary sense. What they imply, rather, is their status vis-à-vis one another with reference to one or more classificatory criteria which have been postulated to correlate with different levels or stages in cultural development. Examples are legion, e.g., literate as opposed to preliterate societies, food producers vs. food gatherer, sedentary vs. nomadic populations, state builders vs. stateless societies ...". This kind of analytic differentiation does not imply that complex social organisation is superior to, or friendlier as, kinship based, decentralized and less hierarchical ways of life.

⁵ Structural complexity characterizes institutional arrangements, not the mental capacities of individuals which seem to be in inverse relation to societal complexity. In fact, complex thinking is a quality most typical for people in less differentiated societies. With low functional differentiation, most individuals deal with all aspects of life: house building as well as theory construction; education as well as ritual performance; food production as well as law enforcing, medical treatment as well as killing – tasks which in complex societies are delegated to specialized institutions. Anthropologists often were amazed by the incredible complexity of the kinship systems in "primitive" societies. The kinship systems appeared as the most extreme case of a multifunctional system. Since the social organisations in stateless societies rarely separate economic social, political, juridical and religious spheres of life, a great number of social functions were regularised and legitimised through permanent adaptation of the kinship terminology and kinship rules of behaviour. So much that anthropologist talk of kinship societies, as against feudal-, state- and industrial societies. Hence structural complexity is just one kind of social and cultural complexity, but the one with the most far reaching consequences, internally and externally of a society. It defines the evolutionary dimension of increasing human control over nature and increasing power potentials of societies in inter-societal competition. Here the theoretical relevance of structural complexity comes in.

In the first part of this chapter, we mention some controversies discussed in cross-cultural literature. It will appear that in spite of its theoretical importance, a common understanding of how structural complexity is measured does not exist. This is probably due to the comprehensive character of the term with ramifications into so many different spheres of cultural organisation. In the second part of the chapter, we present the operationalisation of our concept, the frequency and geographical distribution of the different cultural traits as well as their interrelations.

The results give empirical evidence that our theoretical tools allow for powerful explanations of differences in societal evolution. They also shed a new light on many open questions of cross-cultural comparison and demonstrate that culture can be measured.

3.2 How to measure structural complexity

Is structural complexity a one-dimensional concept?

Studies on cultural evolution gravitate around a common interest. It is the fascination of (or the irritation about) the increasing capacity of societies to control their environment technologically and politically. This defines the core of the evolutionary dimension (see Box 3-1). No wonder that anthropologists were interested in cross-cultural comparison on a statistical base as soon as data were available and computer-based technical tools improved. Using the powerful instrument of statistical analysis, however, required to answer two questions: Firstly, the phenomenon of structural complexity which seemed to be the key of evolution had to be grasped by a handful of indicators that were universally applicable and stand for the same thing. This means that the complex phenomenon of increasing capacities of societies to technological and political control over the environment had to be reduced to one single dimension, which can be measured by one single meter. Secondly, this operationalisation had to be externally valid: What is measured must in a reasonable way correspond to what is intended to be measured, described or to be explained in the real world. It was - and is - not easy to find satisfying answers to these two questions, as our short following review on cross-cultural analysis illustrates:

Box 3-1: Political evolution in a nutshell

"While the aggregation of villages into chiefdoms, and of chiefdoms into kingdoms, was occurring by external acquisition, the structure of these increasingly larger political units was being elaborated by internal evolution. These inner changes were, of course, closely related to outer events. The expansion of successful states brought within their borders conquered peoples and territory which had to be administered. And it was the individuals who had distinguished themselves in war who were generally appointed to political office and assigned the task of carrying out this administration. Besides maintaining law and order and collecting taxes, the functions of this burgeoning class of administrators included mobilizing labor for building irrigation works, roads, fortresses, palaces, and temples. Thus, their functions helped to weld an assorted collection of petty states into a single integrated and centralized political unit".

Carneiro (1970)

The formative phase of cross-cultural analysis on evolutionary processes is characterized by the fascination of the new horizons opened by computer based methods in the 50s and 60s of the last century. When factor analysis for the first time were run with newly coded ethnographic data⁶, it was not only emphasised to test any hypotheses but also to look what comes out when all the new data get processed together (Driver & Massay 1957; Driver &

⁶ In these years, newly coded material from ethnographic reports appeared continually in the *Ethnologist*, a Journal published by G. P. Murdock. They were later published as Ethnographic Atlas. The codes developed for the Ethnographic Atlas are also used in the present report.

Schuessler 1967). These exotic exercises had one robust finding which is noteworthy: A great number of phenomena forming all societies could be lined up in one single dimension which was structural complexity. The result is notable for two reasons. First, the authors had no theory in mind. Second, the fact that they found structural complexity by running all available variables was purely accidental. In this case, lack of theory can be seen as an advantage as there was no way how the authors could have influenced the results. Most researchers, however, had a clear evolutionist interest. Despite this common objective, the operationalisation of "evolution" or "structural complexity" are quite different:

- One of the earliest "Preliminary Index of Social Development" (Naroll 1956) included (1) the size of the largest settlement of the society, (2) the number of craft specialties in the society, and (3) organisational ramification, the number of control officials or groups (such as police).
- Soon later, Freeman and Winch (1957) proposed a scale of social complexity derived from eleven of Redfield's folk-urban continuum variables, including (1) settlement pattern, (2) level of political integration, (3) tool complexity, (4) role of trade, (5) existence of written language, (6) craft specialization, (7) religious specialists, (8) medical specialists, (9) government specialization, (11) existence of money economy, and (11) subsistence technology.
- In 1973, Murdock and Provost developed a scale of cultural complexity based on 10 indicators. They included: (1) Writing and Records, (2) Fixity of Residence, (3) Agriculture, (4) Urbanization, (5) Technological Specialization, (6) Land Transport, (7) Money, (8) Density of Population, (9) Level of Political Integration, and (10) Social Stratification. Scores on the ten scales were to be summed in order to arrive at a single measure of cultural complexity for a particular society. The operationalisation proposed by the two authors is probably the most used measure of cultural complexity.

The three examples suffice to point to the basic methodological problem: The number of indicators for structural complexity (or evolutionary position, for that matter) is somehow arbitrary. The selection takes place "largely on the basis of suggestions in the literature, as potential indicators of cultural complexity. Although obviously intended to measure different phenomena, there were no *a priori* grounds for assuming in advance that particular scales would prove better indicators than others." (Murdock and Provost 1973). It looks as if there was no progress since the days of the early evolutionists who, more than a century ago and in a period of maximum European expansionism, had no doubt of what evolution and progress mean (Box 3-2). In order to escape the dilemma, certain authors suggested to work with one single "best" indicator instead of a composite index. One favourite proposed was the maximum settlement size in a society (e.g. Divale 1976, Chick 1997). But, until the early 80ies, there was no common agreement in the matter, as most researchers remained within their pragmatic approaches.

After these scientific controversies regarding operationalisation, the concept of structural complexity became consolidated. An impressive number of valid complexity indices have been created, most of them highly interrelated (Levinson and Malone 1980). The real problem, therefore, is no longer the question to find significant key variables for evolution. Instead, the problem is how to deal with (too) many new variables that partly or wholly correlate with old key variables. Three examples may clarify the point which is relevant for our own analysis:

- Goody's book "The Logic of Writing" (1986), a qualitative study designed in the way of a cross-cultural analysis, postulates far reaching effects of writing as a cultural tool. Goody argues that not only the state organisation and the money system are a part of early civilizations but that literal religions are incompatible with the reproductive needs of tribal

societies. There is no doubt that certain aspects of religion are strongly linked with structural complexity.

- The Yale studies of child rearing (Barry, Bacon and Child 1957) strongly indicate that the severity of the system of discipline in childhood and the role models set for children by the older generation are functions of the subsistence economy and the roles it requires. The higher the intensity of agricultural production and the more hierarchical the socio-political system, the more severe becomes education.
- In a study on the relationship between structural complexity and political participation as well as responsiveness of political systems, Ross (1981) found that his results contradict regularities in industrialized countries. The standard hypothesis in modern countries suggests that increasing economic development produces an increasingly participatory and responsive political style. Instead, data for traditional societies show the opposite: As the technological and economic power rises, the political systems are more authoritarian and the gap between leaders and citizens widens.

The three examples illustrate that the problem is twofold: the first - illustrated in the first two examples - is to distinguish between variables that are at the centre of the concept of evolution and those which, under this aspect, are rather peripheral. The second is to distinguish stages of evolution: the function of cultural elements is not monotonous; it seems that some cultural institutions - such as the political culture of democracy - do not deploy the same functions in early or late stages of evolution. Cultural evolution, therefore cannot be strictly one-dimensional. Core and peripheral elements of structural complexity have to be distinguished, and distinct levels of complexity may need to be analysed differently.

Box 3-2: An early evolutionist on what "evolutionary position" means

This law of organic progress is the law of all progress. Whether it be in the development of the Earth, in the development of Life upon its surface, in the development of Society, of Government, of Manufactures, of Commerce, of Language, Literature, Science, Art, this same evolution of the simple into the complex, through successive differentiations, holds throughout.

Herbert Spencer (1876)

In the following section, introducing our own concept of structural complexity, we try to cope with this problem.

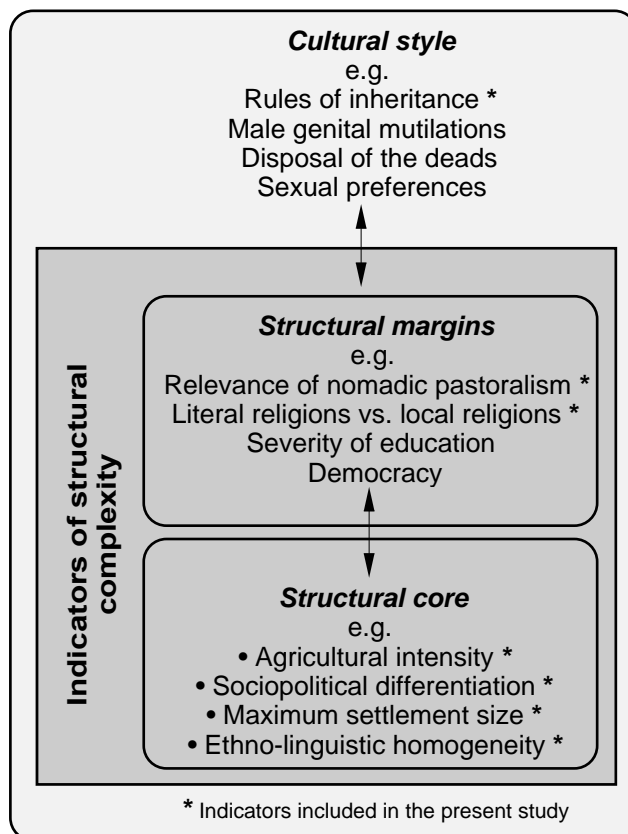
From the core to the margins of structural complexity

In our study, three groups of variables will define the *structural core*: (1) variables measuring the social and political differentiation of society, (2) variables measuring technical aspects or efficiency of the cultural organisation and (3) variables measuring the cultural homo- or heterogeneity⁷ of the African and Asian countries. The last group of variables has not been discussed so far because it does not describe an institutional arrangement on the level of local society. It rather indicates the number and composition of the different local societies within the boundaries of a modern nation state. As will be shown later, not only the homogeneity of a country, but also its population size is strongly related to the structural complexity of the local societies forming the states population.

⁷ Homo- and heterogeneity measure the same thing. High homogeneity equals low heterogeneity, and vice versa. Statistically speaking, the two values can be transformed into each other by a multiplication with the factor -1 . Knowing that in the economic literature, heterogeneity is more common, we prefer homogeneity for purely aesthetic reasons, i.e. to avoid negative correlations in an otherwise positive correlation matrix.

The concept of structural complexity implies that the most important elements of cultural organisation are identified that are related to the *societal function of production* or – in an evolutionary perspective — *productivity*, based on technical and organisational rationality. Agricultural intensity and urbanisation, for example, are functionally related, because an increase of the proportion of urban population necessarily requires farmers who produce beyond their subsistence needs. Following the same logic, division of work on a regional level may be expected to go along with the increase of land transport, the political integration on a higher level, developing the writing system, the use of money and so forth. These indicators measure somehow the potential power resource of a society.

Exhibit 3-1: Centre and periphery of structural complexity



From this core, we distinguish the margins of structural complexity. Such marginal indicators of complexity mainly deal with normative, reproductive or integrative social functions. They can, but must not necessarily be directly functional to productivity and power. This second group of indicators consists of (1) relevance of nomadic pastoralism, (2) the proportion between literal and local religions, (3) severity of education and (4) democracy. They correlate with the structural core, but do not constitute it. The peripheral character of these variables can be explained by the example of religion. Theoretically speaking, religion contains elements of a projective system, transcending everyday experiences into the spiritual world. For instance, in stratified societies, also the spiritual world bears signs of this stratification (and not the other way round); in societies organised on a kinship basis, the spiritual world is populated by ancestor spirits. But, sociologically speaking, it would be naive to reduce religion to functional ideology. Religion can also be resistance to power, rejection of, or indifference to the world of productivity and power. Therefore, if ever we find correlations between the structural complexity of a society and "religion", we hesitate to amalgamate the two. It seems more reasonable – and informative – to maintain their multidimensional character, to keep the two things apart and analyse their relationship. The same logic applies to socialisation

practices or political styles: They partly belong to the functional complex of social systems, while at the same time representing countervailing or independent institutional universes with regard to societal structure and evolution.

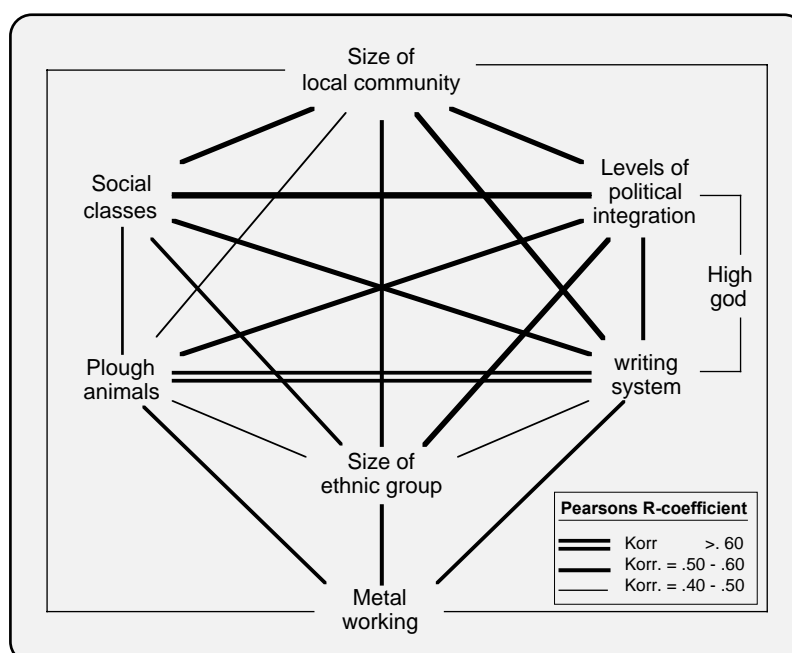
It is not pretended here that the distinctions proposed are clear-cut. We rather suggest a concentric model where any variable is positioned somewhere between the extremes of the "single best indicator" of structural complexity and complete remoteness from the concept

From these two groups, we have to distinguish a third group of variables: These variables are relevant neither to basic reproductive functions nor to evolution in terms of structural complexity. The theoretical assumption is that these variables, contrarily to the ones of the second group, are not correlated to structural complexity. Therefore, they do not belong to the realm of the core culture and are defined as the cultural *style*. The analysis of these cultural institutions (such as rules of inheritance or construction of gender roles) is presented in the next chapter.

In sum, our conceptual framework distinguishes three groups of variables: (1) Indicators of the structural core representing the potential power resource of a society. (2) A second group of variables, correlated with the first, but dealing mainly with normative, reproductive or integrative social functions, indicate the structural margins. (3) Finally, many variables appear "free" with respect to the prerequisites of the relevant functions of societal power and reproduction in a competitive environment. They define what we call the cultural style.

According to our cultural definition, structural complexity includes technical, organisational and symbolic aspects of the institutional order of a society. Whether or not specific cultural traits are integrated parts of the core culture has to be decided on empirical ground. In an earlier study on culture and development, Müller (1992) presented the results of a representative cross-cultural analysis on structural complexity. It was found that indicators of many different areas of social life make up the context (see Exhibit 3-2): techno-economic (metal working, plough animals, writing), political (levels of integration), social (classes, size of communities), and religious-ideological (high god) components form a system which makes high sense from an evolutionary point of view.

Exhibit 3-2: Structural relations in ethnic societies (Standard Cross Cultural Sample, N=186).



As will be discussed later, religion as an institutional order contains both aspects: structural aspects, where significant correlations with core indicators of complexity exist (like the levels of political integration), aspects of cultural style, where no such correlations exist. An example of the first aspect is the concept of high gods since it is an archeologically well established fact that new theological concepts appeared when tribal societies developed into divinely kingdoms with centralised cults and powerful gods presiding over minor religious spirits or gods. Many other religious and cultic forms, however, clearly belong to the realm of the cultural style: Whatever their importance to the believers, these elements do not contribute to societal power and the collective reproductive capacity.

3.3 The indicators of structural complexity in this study

In this paragraph, we present the indicators of structural complexity applied in this study. They consist of single variables and combined indices. Subsequently, the frequencies and the geographic distribution of particular trait are presented in tables and maps. The information should not only establish methodological transparency, but offer insights which are interesting for their own sake.

Box 3-3: On the size and diversity of organisations

"[B]ecause states are far more tightly integrated and much larger than primitive societies, they tend to be far more similar to one another than primitive societies, just as large business organisations resemble one another more than do small ones."

Hallpike (1986: 266)

Looking for a simple but powerful measure of societal complexity, an index including nine indicators was constructed. The selection of the indicators was performed on statistical evidence. According to our theoretical framework, we divided the index into two sub-dimensions. (Exhibit 3-3). We distinguish between socio-political differentiation and the techno-economic traits of a society. The first includes "political hierarchies", "social classes", "size of local communities", "writing system"⁸. This sub-dimension will be called *socio-political differentiation* or SPD. The second aspect includes several measures of the intensity of agriculture plus certain crafts like iron processing. We will refer to this sub-dimension as *agro-technical efficiency* or ATE.

The two indices ATE and SPD are strongly correlated with themselves (exhibit 3-4 below) and with the population size of the cultural units. The population size of the cultural units systematically varies with the agro-technical and socio-political aspect of social complexity: The more productive the economic system is, the more centralised and hierarchically differentiated the pre-industrial societies are, the larger the cultural units. The three represent the most independent variables in our model. In order to simplify the analysis, the measurement of structural complexity will concentrate on the two most basic sub-dimensions: the agro-technical efficiency and socio-political differentiation. Compared to these two constitutive sub-dimensions of complexity, the size of the cultural units is a dependent variable.

⁸ The presence or absence of writing can be classified under both, the socio-political or the agro-technical subgroup. Following Goody (1986), under pre-industrial and largely illiterate conditions we interpret the variable primarily as an instrument in the hands of surplus consumers (priests, merchants, administrators etc.) not in those of agricultural surplus producers.

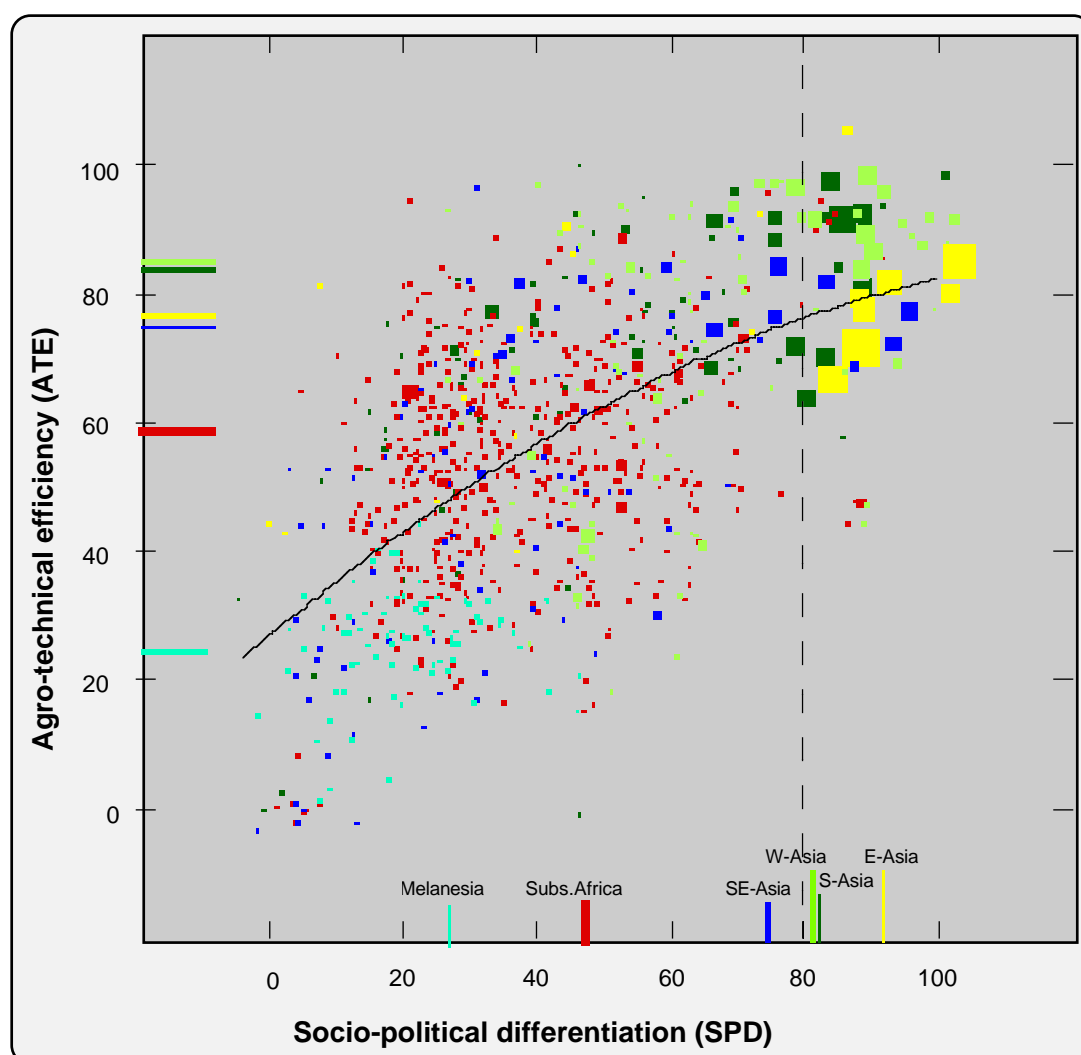
Exhibit 3-3: Nine indicators of structural complexity

SOURCE	VARIABLE	Agro-Technical Efficiency ATE	Socio-Political Differentiation SPD
Ethnographic Atlas *	Size of local communities		SPD
Ethnographic Atlas	Political hierarchies		SPD
Ethnographic Atlas	Class stratification		SPD
Own coding	Writing system		SPD
Ethnographic Atlas	Intensity of cultivation	ATE	
Ethnographic Atlas	Major crop type	ATE	
Ethnographic Atlas	Plough cultivation	ATE	
Ethnographic Atlas	Metal working	ATE	
Ethnographic Atlas	Weaving	ATE	

* Ethnographic Atlas by G. P. Murdock 1967. The categories are defined in annex 2.

3. 4 Mapping cultural evolution

Exhibit 3-4: The correlation between Agrotechnical Efficiency (ATE) and Socio-political Differentiation (SPD): The case of 908 ethnic units in the non-European world.

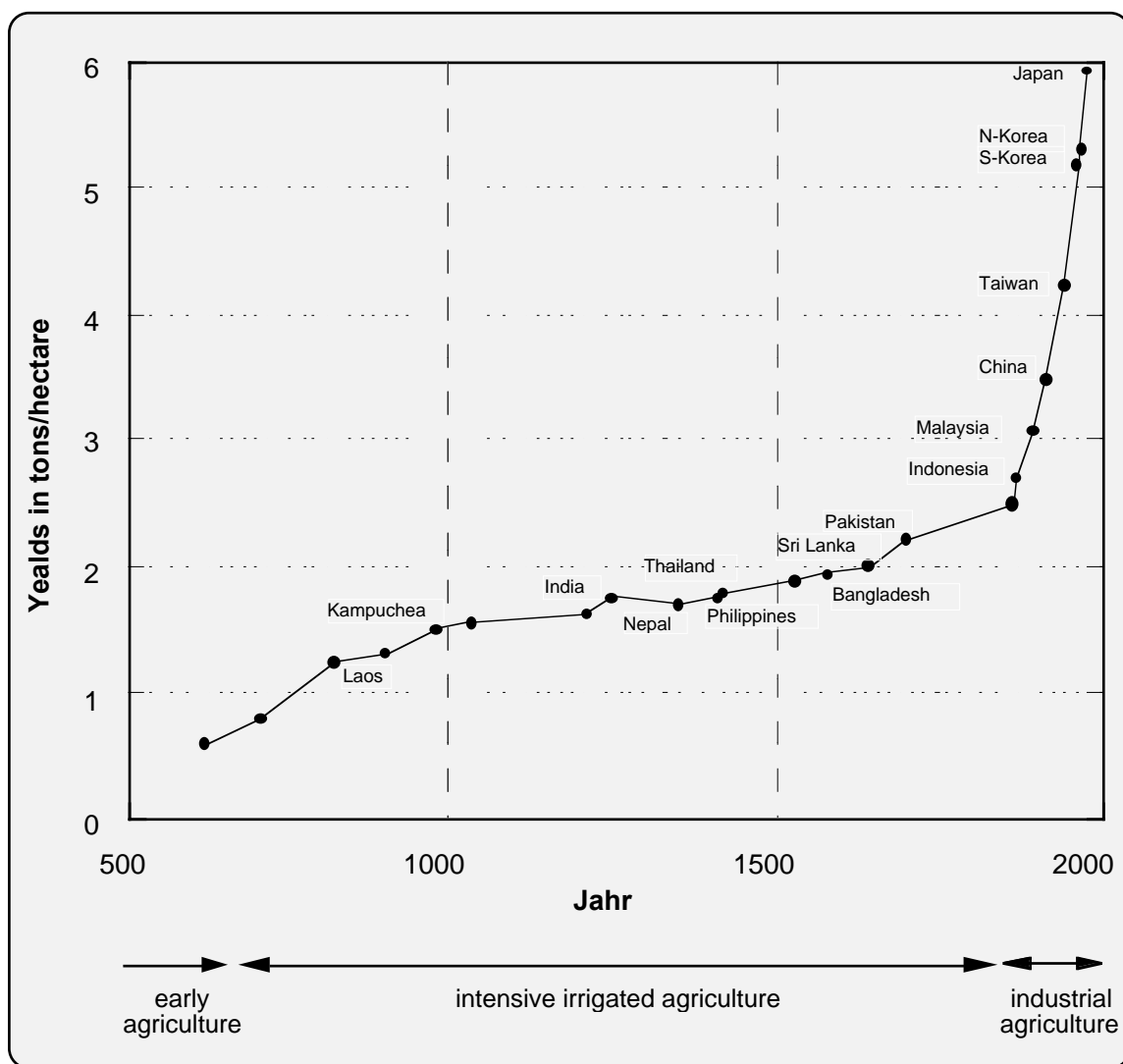


Cultural evolution is a long-term process

The strong correlation and the trend line from the lower left to the upper right corner visualize the history of mankind. Empirically, the picture shows the structural diversity of ethnic units under the frame of colonial or postcolonial states during the first half of the 20th century. In addition, the synchronic view can be read diachronically: It represents ten thousand years of societal evolution from early hunting and gathering groups to large agrarian civilizations.

The structural complex is unequally distributed between the main geographical and cultural regions⁹ of the Non-European world. Differences exist not only with respect to the total level of agro-technical and socio-political complexity. There are also differences in the mix of the two aspects. In the following, we distinguish six sub-regions (Exhibit 3-4 and Map 1).

Exhibit 3-5: Increase of productivity per hectare in Japanese rice production



As can be seen, Asia reaches the highest positions, followed Africa and Melanesia. The knowledge of the historic process most commonly comes from archaeology. In some rare cases of old agrarian societies with written records, the increase of agricultural intensity and political differentiation is documented in some writings. The Japanese increase of productivity per hectare is a case in point (Exhibit 3.4). The graph shows that during a period of about

⁹ That the two criteria strongly overlap has been demonstrated by Müller ed. (1996)

1200 years, from the 7th to the 19th century, the average yield per hectare increased by about 3,5 times, from 700 kg/ha to 2500 kg/ha. With the industrial revolution and the availability of artificial fertilizers, the agrarian productivity accelerated again, from 2,5 tons to nearly 6 tons/ha within a period of about 100 years. In the context of this chapter, the pre-industrial increase is more relevant than what happened in modern Japan. It is an example of increasing investments in irrigation work; of heavy surplus extraction by an elite maximizing power in gradually more centralized political units; of increasing labour input per caloric output; of increasingly rigid work discipline among a more and more dependent peasantry.

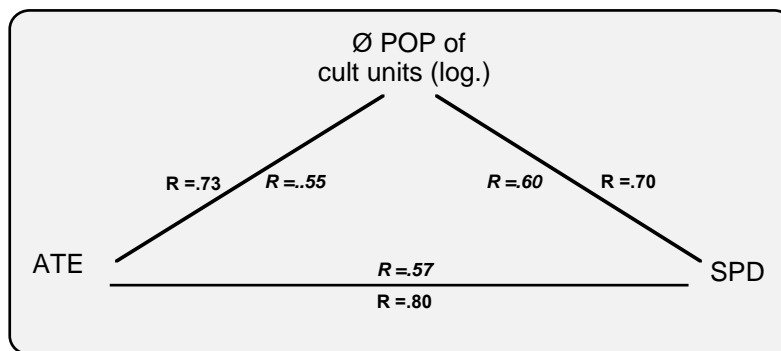
Case studies always are somehow incomparable. However, here we are not so much concerned with historic conditions of singular cases, but with general tendencies allowing to detect long-term trends. Although each region or country shows specific particularities, other case studies from China, West Asia or Europe would reveal similar dynamics like the one Japan. They can exemplify what the correlation from synchronic analysis is suggesting as a historic process. For this reason, the Japanese development over the last 1300 years is complemented with the actual (1960s) average yields in other countries. The presentation leads to the expectation that countries with actually lower yields will follow the Japanese path either slowly or rapidly, either full or partially – but the direction of the move, in the long run, is defined by needs from population increase, social and political considerations as well as changing consumption patterns. Many indices of structural complexity employ subsistence modes apart from patterns of social and political organisation¹⁰. Lomax (1968) devised a scale of increasing productivity built from variables of the Ethnographic Atlas (Murdock 1967) codes on subsistence. Each step in this nested hierarchy added an increment of productivity to the resources of the preceding productivity level, with no loss of the facilities attained before. The hierarchy was as follows: (1) Extractors, harvesters of wild products; (2) Incipient producers, as above, but with agriculture; (3) animal husbanders, as above, but with large domesticated animals to convert vegetation into protein; (4) plough agriculturalists, as above, but with the plough with animal traction to increase the range and intensity of cultivation; (5) irrigators, as above, but with control of water for crops. The rise in productivity, as recorded on this scale, can be observed in many areas, albeit in slightly different versions. Such shift never happens out of a natural tendency to productivity increase. They are always correlated to increase of population, stabilization of settlement, degree of political centralization, degree of social layering, and many other aspects of socio-economic complexity.

Increasing structural complexity means increasing size of societies

Increasing centralization of political control over functionally diversified societies not only enables ruling elites to maximize the agricultural output. It also increases the chances to externally expand their control over neighbouring societies of lower structural complexity. In fact, the 72 cultural units with an index value of over 80 on the SPD-dimension in Exhibit 3-4 comprise more people than the 835 remaining cultural units together. What usually began by external war ended with the internal administration of production, exchange and legitimisation in increasingly large socio-political units. Since the division of labour is increasing the mutual dependence is enhancing, therefore rational political management appears as legitimate when the ruling class is able to guarantee internal stability, law and order.

¹⁰ E.g. Naroll (1956); Lomax 1968); Harner (1970); Carneiro (1970); Murdock & Provost (1973); Lomax (1977); Müller (1992).

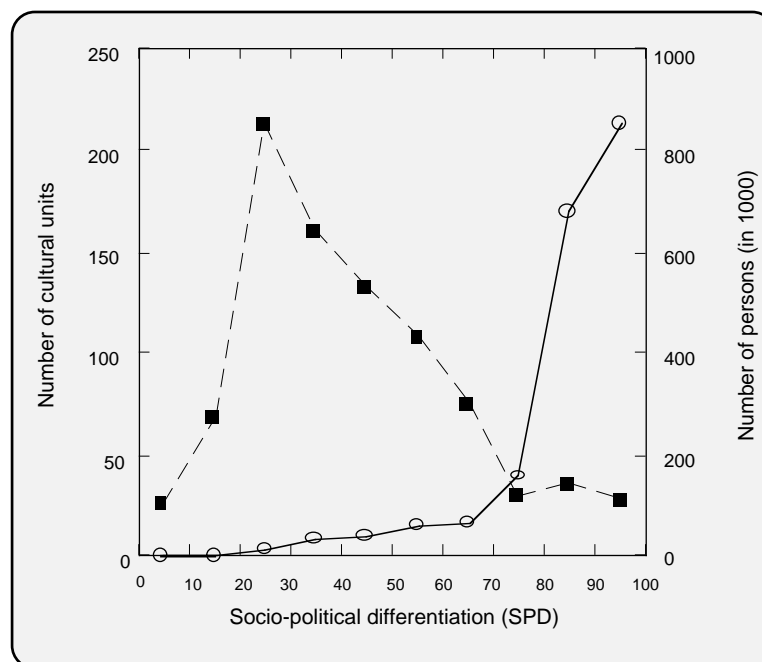
Exhibit 3-6: Size of the cultural unit – the third dimension of structural complexity



Traditional structural complexity is very unequally distributed over the globe

The distinction of six cultural regions in the non-European world by coloured points shows that the different areas differ largely in their structural complexity. The extremes lie close together: At the lower end, we find the cultural units in Melanesia; at the upper end, East-, South- and West Asian units dominate. South East Asia appears equally well represented in the highest fifth of structural complexity; the average value of the region is slightly depressed by relatively large units in the middle and lower range of structural complexity. The broad lower middle range of structural complexity is occupied by African units.

Exhibit 3-7 Many people live in a few societies, and vice versa



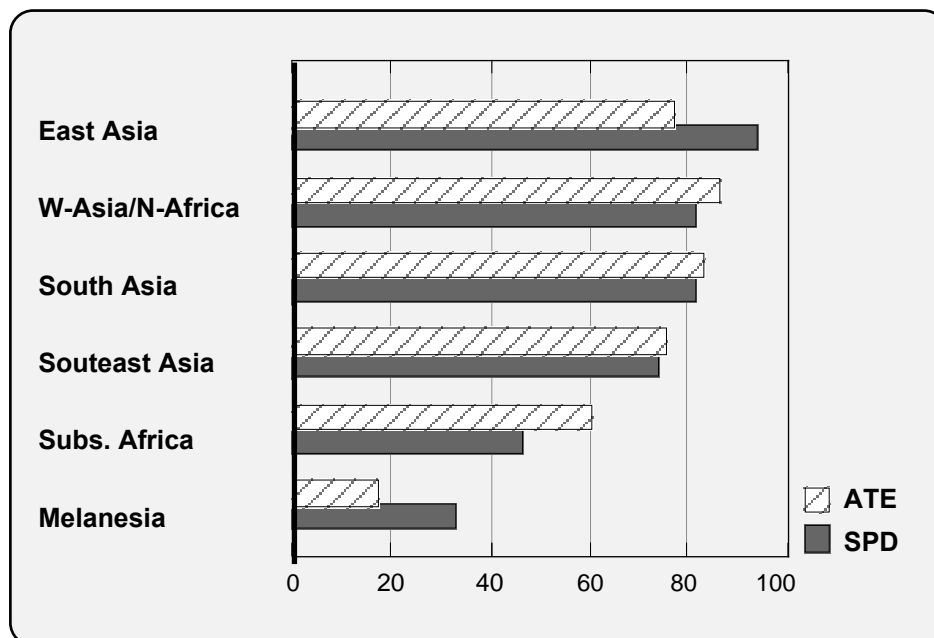
It should be noted that the averages calculated for each region, marked separately at the margins of the two sub-dimensions of complexity, are weighted by the population of the cultural units. The dominant visual impression of the large units should not make forget the internal cultural heterogeneity of each region in terms of structural complexity. Apart from Melanesia which is relatively homogenous regarding all three variables, and Sub-Saharan Africa which is quite diverse in terms of structural complexity, but is relatively uniform with

respect to the size of the units, all of the Asian regions include a great number of units in the middle and lower range of structural complexity. It is noteworthy that within the lowest 20 % on the SPD-scale, all regions are represented with the exception of West Asia. Another example is China where about 93 % of the population are ethnic Han (split in about 7 large groups). But the remaining 7 % of the national population consists of more than 200 ethnic groups speaking 142 different languages.

The two sub-dimensions of structural complexity are not identical

Although agro-technical efficiency depends on socio-political differentiation and vice versa, individual ethnic societies are only exceptionally equally developed on both sub-dimensions. Ethnic units on the lower part of the trend line are *relatively* high in socio-political dimension, or *relatively* low on the agro-technical dimension. The reasons for such differences in most cases are ecological by nature and are here not discussed further. Exhibit 3-7 gives an overview of the average values for ATE and SPD in each of the six cultural regions.

Exhibit 3-8: Regional differences of ATE and SPD



In East-Asia the traditional socio-political complexity reaches a maximum and is more developed than the agro-technical counterpart. In Sub-Saharan Africa and most in Melanesia, we observe the contrary. Though in these regions, the cultural heritage is characterized by more egalitarian *and* less productive institutional sets, the agro-technical potential clearly lies above the socio-political differentiation level.

As for the reasons of such differences, one is left to speculations. In the case of *East-Asia*, we tend to speak of an *agro-technical* deficit. It has been convincingly demonstrated, that the Chinese energy system, around the 18th century, reached a level of sophistication which hardly could be improved within the traditional logic of sparing resource use (Debeir 1991). Since the socio-political differentiation moved beyond the agrarian capacity – which happened more than once in Chinese history and each time was parried by measures to increase the agro-technical efficiency – a solution was out of reach until the time when the modern Western scientific knowledge opened up new options. Whereas nowadays ecologically sensitised observers may dream of "a point where some nations will give up the habitual

effort to expand their energy consumption, and, instead, fragment in order to achieve a more workable organizational base" (Adams 1988), China opted for maintaining the high level of structural complexity and increasing the agro-technical potential. The option, in this case, did not adapt to industrial or consumer interests in the rich countries but to the dilemma of an imbalance between agrarian efficiency and socio-political complexity.

As for the *African* imbalance, many authors pointed to the devolutionary effects of the slave export trade, the one to America as well as the older one to the Arabian countries. With our data one could argue that the socio-political lag behind the agro-technical efficiency is reflecting the loss of complexity suffered from slave trade. Whatever the credits of the argument, it does not explain why African societies became the object of the greedy clutch of neighbouring civilizations (and not the other way round). Our data rather points to a structural weakness of autochthon political systems *before* external slave trade was established. Slave trade may have deepened already existing structural disparities and may have contributed to the corruption of local leaders who did not hesitate to sell men and women of their own (or neighbouring) people. But it does not explain it. Therefore we would like to ask the other way round: Why should ethnic groups have transformed agro-technical potential into a "civilizational progress", when such progress costs more labour efforts for the large majority of the producers, at least under pre-industrial conditions? African people in the past did not hesitate to adopt to new plants and new technologies from neighbouring societies as long as such innovations contributed to the well being. But they avoided a socio-political differentiation which in practice means enhance of hierarchy and additional work. From this *historic* point of view, the Chinese (or European) civilization appears in a less favourable light than the African case.

As mentioned before, the problem started when the Europeans firmly established their competitive model on a global scale during the colonial era.. Under these new and externally imposed conditions only African culture appears as if it were deficient. This raises the question which elements of the African cultural heritage are compatible with the inevitable call for increased productivity due to raising population density, urbanization and raising expectations. It has also to be worked out which of the institutional solutions of the past seem worthwhile to be carried on under new ecological conditions in the eyes of a young generation who represent the majority of the continents population. Such reflections are certainly not specific for Africa. But in this continent – as well as in Melanesia – they most pertinent.

Map 2 conveys a double message: First, it exposes the geographical distribution of different types of agriculture such as irrigated agriculture, plow cultivation and horticulture in the non-European world. Secondly, the map shows the cultural units which lay at the basis of the cross-national analysis. The national indicators of the cultural heritage are based on information aggregated from the ethnic units in each of the 87 countries coded. The map shows about 1400 such points, representing the originally coded ethnic groups. In the *Atlas* (Müller 1999), and for the calculation of the cultural heritage, these units were split into subgroups of members of the same ethnic group living in different countries. The diameter varies with the population size. The size of the points reminds the fact that many people live in a small number of big societies, in the past as well as in the modern world, and that a large number of societies include only a small minority of world population. Statistical results, in cross-cultural and cross-national analysis, are based on aggregated units of very different size. Their main purpose is to enable theoretical insights into institutional regularities of societal aggregates. In such studies, the smallest units deserve as much attention as the largest ones, because each one represents a historically realized possibility of human existence and is treated as an experiment (Raoul Naroll). In a development-oriented approach, as in the present

research, the focus lies on the life conditions of the human population at large. Therefore, we will have to complement our cross-national results with results that are weighted by the national population.

3.5 Conclusion

In this chapter, it was argued that in the long history of the last 10'000 years the civilisatoric progress in agrarian societies had to be paid by heavier work load, increasing inequalities and ideologies justifying deferred gratification. Psychologically speaking, increasing structural complexity was complemented by increasingly severe forms of education, more severe self control and discipline. Paradoxically, there seems to exist a non-intended positive consequence of the imposed work ethic: As our cross-national analysis will demonstrate, higher structural complexity of the cultural heritage improves a society's chances to above-average economic growth in the modernization process, and, as a consequence, the probability that future generations will be able to decide whether reducing working hours and increasing options in life should become a valuable collective objective.

We further introduced the conceptual differentiation between the core culture and the cultural style. The *Core* culture was decomposed into two parts: a structural centre, representing the potential power resource of a society, and functionally linked institutional arrangements which are supporting the reproduction of the specific social formation. The *cultural style* was defined as those institutions which are uncorrelated with the level of structural complexity in human evolution. Such elements of culture seem to have had no influence upon the long-term competitive capacity of societies.

So far, only indicators of the structural centre have been discussed. The empirical correlations confirmed the relevance of our structural complexity dimension. In the following, we are introducing other aspects of culture. The basic question will be what kind of relations they have, in human evolution, with structural complexity. The stronger such links, the more the cultural institution makes part of the core culture. If the links are weak, the institution in question represents the cultural style.

4 The non-evolutive perspective: Cultural Style

Culture consists of more than management of power. Structural complexity, as discussed in the previous chapter, is only one among several cultural dimensions by which to characterize the cultural heritage of societies. In this chapter, other elements of culture will be discussed such as kinship systems, gender roles, division of labour and type of subsistence economy. Their geographical distribution in the non-European world will be part of the analysis, as well as the empirical connections between structural complexity and cultural style. As far as institutional sets are related with structural complexity, they make part of the cultural style.

Even though we are dealing with well established anthropological theories, our discussion on cultural style will be more tentative than the one on structural complexity in the previous chapter. The first reason for that is a logical consequence of our theoretical concept. Cultural style, not relevant for competitive evolution, may be maintained even when structural complexity is changing, or it may change while structural complexity remains stable. The two are not correlated *by definition*. The second reason has to do with our previous remarks: More than anything else, the interpretation of cultural style must, be based on the specific knowledge of the societies in question.

Kinship is a good example. Kinship organization is an intensively debated field among social anthropologists, but rarely known outside those specialized professional circles (except, of course, among billions of villagers and marginal urban dwellers who rely on it, but they do not count here). Considering their relevance for development, this study will introduce a few basic concepts of kinship theory. We are aware that the transcultural logic of increasing productivity and power potentials is easier accessible than kinship systems of societies of different structural complexity. We feel that any longterm development theory has to link the two forms of social organization: solidarity based on kinship and solidarity based on national redistribution. Strategies of self-organization in kinship terms remain marginal, local and certainly difficult to appreciate for those in a more privileged and highly secure position in the world society. Our discussion of some institutions will show that cultural style has meanings different from core culture. As we will show in Part III, in modern development, functions of cultural style have more to do with social development than with productivity. As in the previous chapter, the cross-cultural analysis reveals some remarkable regional patterns, but also borderline cases: depending on the context, some institutions may be regarded as cultural style or core culture. Supporting our comparative approach by maps, the discussion on cultural style is also expected to introduce a new, an anthropological perspective in the comparative analysis of development.

4.1 On the central function of kinship systems

Introduction

Kinship is a universal phenomenon. But it plays a different role according to the structural complexity of societies. In modernization theory, it was predicted that in the process of modernisation – operationalised as industrial division of labour, modern education, urbanization etc. – extended kinship networks would lose their meaning in a more and more individualized context. Kinship would not disappear as such, but clan structures, large corporate kin groups and extended families.

Such assumptions were equally ethnocentric and objective, as the following example may demonstrate. Most European societies use a kinship terminology which is called "Eskimo system" by social anthropologists. It is a very basic kinship terminology with a minimum of differentiation of social categories. It will be shown in this chapter that the most primitive and the most advanced societies – in terms of *structural* complexity – use the same simple system of kinship terms, whereas the overwhelming part of mankind is much more sophisticated in this regard. It was anticipated that the non-European world would soon move toward an individualistic reduction of the kinship systems. Certainly this was an expression of an ethnocentric world view, perceiving the "westernisation" of Africa and Asia as a natural outcome of economic and political progress. At the same time, there is a structural logic behind the assumption. The assumption that fully developed nation states with a high redistributing capacity, represent functional equivalents to the kinship organization in traditional societies, is a plausible scientific proposition: If developing countries really would indeed successfully attain the capacity to replace kinship solidarity by a more abstract national solidarity – as is the case in the rich Western countries – it might be reasonable to expect that individual life styles were expanding (for empirical evidence: Hofstede 2001). From a developmental point of view, however, it is not primarily the disintegration of extended corporate kinship systems that is intriguing, but the fact that the structural preconditions for such a process are not diffusing faster. Today we observe that traditional networks and legatures weaken faster than alternative forms of institutionalised solidarity get operative.

How discretionary are kinship rules?

We insist on the difference between structural elements and elements of cultural style in order to show of how randomly and discretionary cultural elements are composed in the cross-cultural reality. An example: All known societies have norms and rules for marriage. While norms may differ, it is a general fact that sexual relations are collectively regulated. In this respect, there exists no difference between societies whatever their level of structural complexity. Does this mean that "Marriage" is part of the cultural style of a society; that marriage rules are discretionary? Our data point in a different direction. They show systematic changes of the *form* of marriage with increasing structural complexity. Monogamy for instance is one of the possible forms of marriage and family structure. Our data show that monogamy varies systematically, but in a non-linear way, with structural complexity:

- In the lower third of the complexity scale (< 33.3) with 7 % of the African and Asian population, there exists a highly significant negative correlation: The higher the degree of complexity, the more monogamy as an institution is replaced by polygynous forms of marriage ($R = - 0.34$; number of ethnic units = 416).
- In the upper two thirds of the complexity scale (> 33.3) with 93 % of the African and Asian population, the link is significantly positive: The higher the structural complexity, the more frequent monogamy is defined as the norm ($R = + 0.29$; number of ethnic units = 464)

The result need not to be interpreted here. We just meant to give an example of an institution which at first sight seems to be indifferent with respect to structural complexity, but at a closer look reveals a curvilinear relationship. And within certain ranges of the complexity scale, the form of marriage appears to be a function of structural complexity.

Other traditional institutions can be identified as elements of the cultural style. They appear to be relatively independent from the structural complexity and therefore not relevant for the competitive evolution of a society. Even though institutions of cultural style do not directly contribute to productivity and to the collective power potential, they are important and meaningful in all societies, e.g. for the formation of identity, internal cohesion and solidarity. The empirical evidence that a cultural institution does not correlate with the rise of productivity and power potentials raises many questions and is open to different interpretation:

- Is cultural style an irrelevant – a "decorative" – element of societies as colours of flowers also can be? In case that this is true,
- Is culture relevant for societal functions that may not directly add to competitiveness, for instance social integration?
- If cultural style does necessarily vary in accordance with complexity and with evolution, then it should be possible to preserve cultural traditions in the face of increasing or decreasing structural complexity. Can, for instance, regularities developed in agrarian societies be extended into industrial societies?
- Since evolution may be a burden for a majority of people, is cultural style then a societal option to devise better ways of life and of human dignity?

These questions cannot be answered without the theoretical background of social science; the answer has to rely on insights of anthropologists and their accumulated knowledge on specific local societies. We draw from both when discussing some of the institutions of cultural style, such as kinship rules and ties, gender orientation in descent and inheritance, or division of labour.

Kinship rules mean everything in low-complex societies¹¹

Kinship and marriage are multifunctional basic institutions in human societies, regulating social interaction, reproduction, and the flow of wealth. Although some of underlying concepts and definitions may be quoted, kinship continues to be a central focus of anthropological inquiry (White 1998). Kinship systems form the ground for networks and corporate groups by defining the rights and duties of different categories of persons in a community and regulating their transactions. A corporate group is a set of individuals who have socially recognized claims – rights – to consume or use a specific set of resources. When the resources in question are scarce, the rightful claim of an individual must be limited to a *share* of that resource.

In traditional forms of social relations, membership within corporate groups is defined first of all by three criteria: age, sex, and parentage. Examples of corporate groups are households and domestic groups, lineages, tribes, or nations. Thus, age, sex and parentage become the basis for defining categories of persons that differ in the size and composition of their rightful claims to common resources. As Bell (1998) points out, the ascribed and irrevocable link between a person and collectively pre-defined rights and duties is what separates the shares held in such groups fundamentally from those held by the stockholders of the capitalist enterprise.

The most robust of corporate groups is the household which grants its members more solidarity than any other group. The most incisive criteria for status are the inheritance rules defining access to valued resources. Such wealth can take many forms: women, animal stock, land, reefs, totems, traditions, magic or simply implements for production. Wealth must be useful without being rapidly used up. Bell writes: "While a herd of cattle can be consumed as food, it may be managed in such a way that only the male and/or older female animals are subject to slaughter, this allowing the herd to grow. Similarly, a unit of agricultural land may be rapidly consumed by practices that fail to preserve its productivity, or it may be managed appropriately as wealth. And, historically, an important and sought-after form of wealth has been the fertility of women, which, acting as a capital resource, promotes an exponential increase in the demographic power of a group. In most cases the eligibility of individuals to membership in wealth-holding corporate groups is by means of inheritance"(Bell 1998:189).

This is the stuff all kinship systems are made of: sustainability, fertility, demographic power, security, membership, collective control over limited resources, production and exchange. Until the emergence of nation states, most societal functions have been managed within specific types of kinship systems. We do not claim here that the norms embedded in kinships systems have always been respected, or that kinship systems and their norms did not change over time. More important is the fact that most of these fundamental functions of social life are not yet taken over by strong and reliable state institutions in many countries. People primarily depend on investments they make in informal networks. Most of the existing nation states in the non-European world lack the means to provide substitutes for the vital societal functions of the kinship system. Only part of the workforce has access to occupation in industrial enterprises – the alternative to kinship-organised subsistence economy.

With only a small surplus taxable from the formal economy, most states lack the means for social security for the unemployed, the old, or for health and education. The vast majority of the urban and rural population continues to rely on informal networks based on traditional

¹¹ Most European societies nowadays use a kinship terminology which is called "Eskimo System" by social anthropologists. It is a very basic system with a minimum of differentiation of social categories. It will be shown in this chapter that the most primitive and the most advanced societies – in terms of *structural* complexity – use the same simple system of kinship terms whereas the overwhelming part of mankind is much more sophisticated in this regard.

conceptions of rights and duties, honour and shame. In adapting to new conditions, marginalized people especially reconstruct the institutional grammar of the past. Offering open access to a renewable cultural resources – open to those making part of the patchwork of local networks –, the cultural heritage acts as a ready-made matrix to future developments. If people draw from this pool, it is not for in-born traditionalism, or because of untimely *concepts* such as limited goods. It rather reflects the *reality* of limited goods, and it is only rational to reduce transaction costs under conditions of factual shortage of vital resources.

What kind of hybrid culture is locally growing will primarily result from two factors: (a) the economic position of a country in the capitalist world system – it determines the state's capacity to build up functional equivalents to replace the traditional core culture of the informal society – and (b) the specific type of traditional institutional arrangements. Among the latter, the kinship system is the most prominent one.

4.2 Kinship I: The extendedness of kinship ties

Saying that kinship is regulating social interaction, reproduction, and the flow of resources is one thing – not many would oppose such a statement. It is widely accepted that kinship and property transmission, society and economy are related. It is another thing to specify *how* such exchange networks are defined and institutionalised. Without going into details of anthropological typologies, we mention but two fundamental criteria of traditional differentiation. The first is the difference between lineal kinship organisation and ego-centred forms of constructing kin categories and group membership; the second refers to the relative weight of matri- or patrilineal orientation when descent is unilineal (see kinship II).

Two basic forms

In lineal systems, rights and duties are acquired in each generation through father or mother (sometimes both). *Clans* are descent groups that are unilineal, unilateral (father's or mother's side, not both), exogamous and egalitarian by heredity. As for the so called non-lineal, ego-centred (*cognatic*) systems, *Genes* or *kindred* are descent groups that are bilaterally defined (mother's- and father's side) and hierarchical by heredity. Such kinship systems tend to produce permanent leadership offices with much emphasis on genealogy for ranking purposes (Service 1977). Kinship in the cognatic system comes close to objective (biological) genealogy, with equal cultural emphasis on mothers' and fathers' side.

The consequences of the two types of defining positions in society are far reaching. In the case of ideological, asymmetrical (lineage-)-formation of kinship, the size of tribal groups may be attained by a million or more people. Its membership is precisely defined through genealogical extension in time, down to a mythical or real founder of the first line. In principle, all actually living descendants of a founding ancestor are equal, though descendants of first born and later born sons (rarely: daughters) may differ in status. Political leadership in such systems tend to be transitory and limited to specific conflict solution. They are complex through their extension in time, not in terms of hierarchical differentiation as is the case in class or caste societies. In order to avoid confusion between the two types of complexity, we will use the term *extendedness of social relations* when dealing with lineage based complexity.

If one looks to ego-oriented cognatic systems, the extension of the group develops "horizontally", i.e. among all the living descendants of the 4 grandparents, the 16 grand-grand parents, the 64 grand-grand-grand parents – and so forth. In fact, there is no "and so forth", because the relational capacity of individuals in the real world is limited. In cognatic systems, the extension of membership occurs in the unstable *social* space, not in an irreversible *time* space. Having no clear definition who belongs to whom, kindred are unsuited to mobilise

collective action on a kinship ideology. Such mobilisation would always be limited to a few hundred persons – and who exactly these few hundred persons are cannot be defined. Membership and leadership are not pre-defined on ideological grounds (no common ancestor exists, no extended concept of "brother", no founder of the clan). On the contrary it is established and reproduced in a rather arbitrary social environment with less sharply carved ideologies.

These short glimpses upon two extremes in the collective formation of symbolic universes – the social against the temporal space – may suffice to render plausibility to the idea that culture matters in development. Societies with lineal descent systems tend to be far more critical against any institutionalised hierarchy than ego-centred systems (LeVine 1971). The concept of lineage lays the ground for an extended collective identity. It is highly structured and supports the mobilisation for corporate action, if needed. Since the collective identity of the individual is so clearly defined and socially confirmed in frequent corporate actions, the individual maintains a strong loyalty to paternal kin. *Competing loyalties* and particularly the demands of the state – if strong enough – have here more eroding effects than in ego-centred kinship systems where there is less formal structure to be eroded. Since all known nation-states institutionalise collectivity above and beyond traditional genealogical categories, it is expected that stronger lineage traditions in a country's cultural heritage render national integration and economic development more difficult.

Measuring kinship

Before hypotheses on the influence of the cultural heritage upon modern development can be tested, the indicators measuring the cultural past must be introduced, together with their interrelations. Our first group of indicators, measuring the "extendedness" of institutionalised kinship relations, combines 4 variables: (1) transfer of wealth for marriage; (2) marital composition; (3) the internal segmentation of local groups in terms of marriage and kinship; (4) the rules of descent. As one can see from Exhibit 4-1, the correlations among these four components are significant below the 1% level and pointing to the expected direction. The four variables cover different aspects of the extension and tightness of ascribed local networks. Together, they stand for the institutional foundations of genealogical orientation. A few remarks on the four components of the index may be added:

Exhibit 4-1: Four indicators of lineality of the kinship system

Name of variable	Var. in Annex 2	The variable stands for ...	1	2	3	4	5
Wealth transfer for marriage	14	... forced dependance of young adults	—				
Marital composition: Mono- vs. Polygyny	15	... aloofness of conjugal relations	-.31	—			
Internal segmentation of villages	16	... ancestor-based communal integration	.22	-.30	—		
Rules of descent: lineal vs. cognatic	17	... linearity of descent rules	.28	-.37	.34	—	
Sociopolitical differentiation (SPD)	12	... structural complexity	n.s.	.10	-.15	.05	—

The *transfer of wealth for marriage* describes what has to be given in exchange for a wife, her reproductive capacity and work force. The coding indicates how much the kin of the future husbands and wives are involved and in fact controlling the process. As can be seen from the table, the dependence of the young generation is higher when the descent rules are more lineage-oriented. It has also been shown that the bride wealth increases with structural complexity¹². As our analysis proves this practice to be relevant in all kinship systems, we add some commentaries.

Unfortunately, dependence is increased and accelerated with increasing monetarizing of all social relations in the course of modernization: In many parts of the world, young men have to pay for a traditional legal marriage from a half years to a full years salary to the family of a future wife. On the other hand, young women pay the sum directly to their parents in order to be free to chose whoever they like to marry. Of course, such practices stand completely outside the traditional logic of mutual exchange. The point here is that practice and rules of the local institutions are open to all kinds of interpretation if conditions for social transactions change. But as a rule we can say, that new institutional arrangements fit into pre-existing power differentials and tend to produce non-intended consequences.

The *type of marriage* – our second indicator of extendedness – not only influences the composition of the households, but also the vested interests of their members and the relations among them. In average, common interests and intimacy between husband and wife are more pronounced in monogamous than polygynous marriages. Where collective cooperation is based on lineage principles, husband and wife belong to different identity groups due to exogamous marriage rules. Under such conditions, intimacy between conjugal partners is often viewed with a critical eye and judged as a potential threat to the clan of origin (Broude 1983; de Munck 1999). Empirical facts are consistent with this view: The more strongly a society is organised on lineage principles, the more frequent is polygyny (hence the aloofness of conjugal relations) and the higher is the control of marriage through extensive exchange of marriage wealth. In societies with ego-oriented (cognatic) kinship systems, personal identity and social relations are less based on ideological principles and they manage marriage arrangements on a lower level of expenditure and exchange.

The third indicator – *internal segmentation of villages* – is partly a result from marriage and kinship norms while at the same time reproducing them. In the most common case of (*patri*-) lineal organisation with exogamy, combined with the residence of wives in the location of the husbands family, local communities become strongly segmented. Brothers and their male descendants tend to live together with wives taken from outside – outside not only in social, but also in spatial terms¹³. If, however, societies are less structured by lineage principles and the descent based internal differentiation is low, it is locality rather than descent which forms the basis of corporate grouping (Leach 1971). Wives and husbands can more easily find each other "just around the corner" with lower hurdles set by kin and offer more options with regard to the residence of the new couple. The question of residence is important because

¹² Marriage exchange theories are particularly interested in the reasons for differences in the quantity and quality of transactions. Since we try to link our institutional types with different levels of structural complexity, the following remarks of Schlegel (1988) are of particular interest: "Absence of transactions [of bride wealth], women exchange, and bride service characterize marriage at the lower levels of cultural complexity". And on the side of high complexity: "Societies that produce large amounts of goods and have greater social complexity tend toward asymmetrical exchange of goods: bride-wealth, dowry and indirect dowry. These findings support a property hypothesis and lend credence to our assumption that property relations underlie the type of marriage transaction".

¹³ "The primary effect of a rule of residence is to assemble in one locality a particular aggregation of kinsmen with their families of procreation. Patrilocal [...] residence bring[s] together a number of patrilineally related males with their wives and children. Matrilocal residence aggregate matrilineal kinsmen and their families" (Murdock 1949:17f.).

local groups are the super-familial units within which all important day-to-day and face to face interactions occur.

The three variables – transfer of wealth, type of marriage and internal segmentation of villages –, together with the principle of descent, are functionally related. They were selected with an abstract concept in mind, intended to identify institutional sets which differ with respect to the extent of network involvement. Roughly speaking, kinship extendedness measures how much social life is ordered along principles of unilineal descent (irrespective of the lateral preference) in combination with the extent of the kin's involvement in basic aspects of social life.

Core culture or cultural style?

Our next question concerns the link with structural complexity. Are the two forms of complexity – the structural and the kinship based – additive or exclusive? Is the ideological integration of the abstract other on the basis of lineage ideology compatible with the functional integration of people with different occupations within a framework of state ideology?

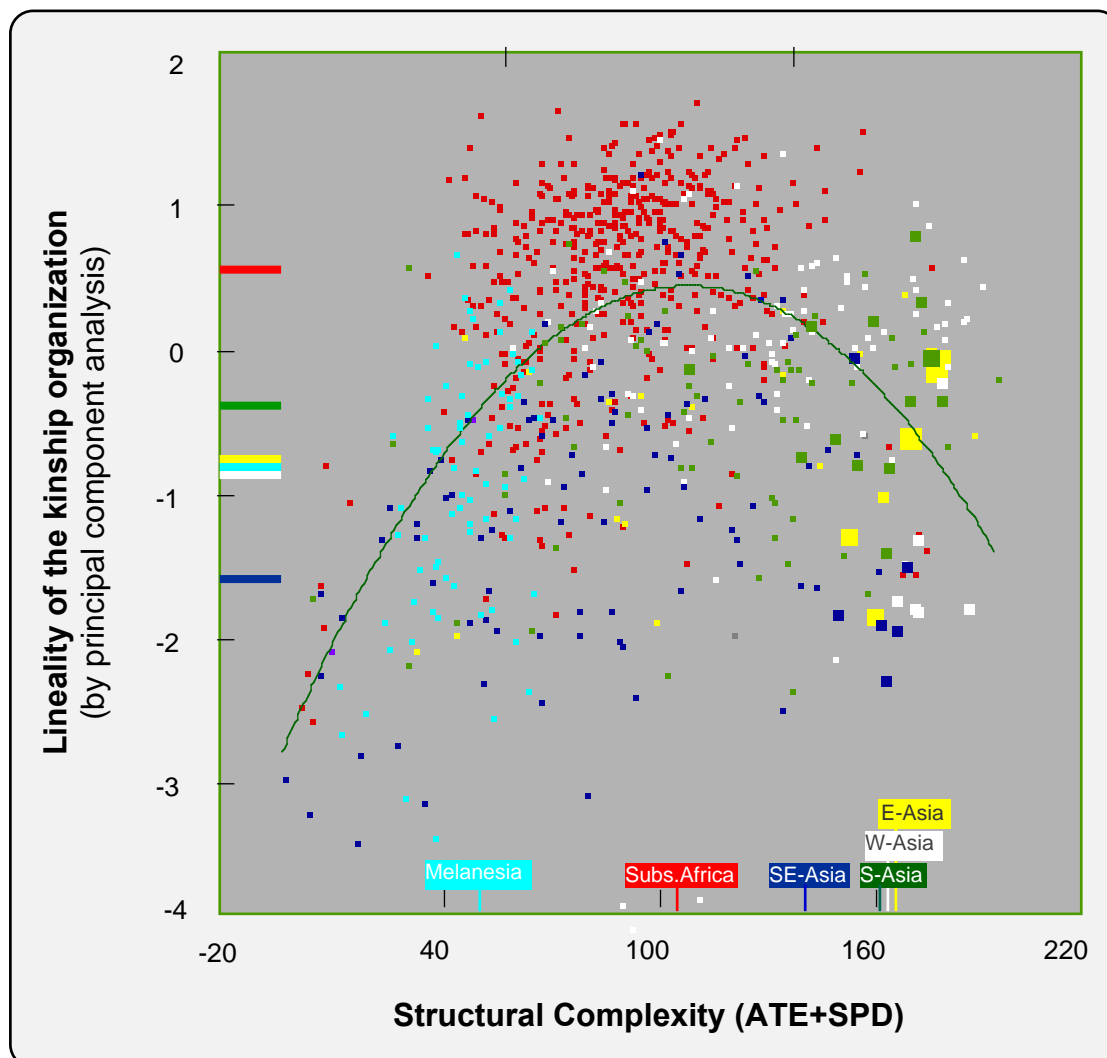
Asking the question in this way it partly contains the answer already, although in the scientific debate, the opinions on this question are divided. For example, Nimkoff and Middleton (1960) found a positive correlation between societal and familial complexity; Osmond (1969) found a negative relationship; and Murdock (1949) found no association at all. Goode (1963) concludes that no specific family forms seem to be correlated with the specific 'states' of the economic and technological evolution. Blumberg and Winch (1971) were the first to postulate that such contradictions might result from the fact that neither earlier study had utilised the entire range of societal complexity. In fact, with a sample ranging from hunters and gatherers to complex agrarian societies, the relationship took the shape of a curvilinear function: "This means that the most extended, complex *familial* systems should be found most frequently among societies in an intermediate range of *societal* complexity, particularly among settled agricultural peoples. Per contra, at the ends of the continuum of societal complexity – among the simple hunting-gathering groups and in modern industrial states – we should find a familial system based on small, independent, non-extended units, that is, a nuclear family system" (Blumberg 1971:899). The authors were able to provide significant statistical evidence for the postulated curvilinear function. Unfortunately, their measure of familial complexity was based on household composition instead of kinship system, a measure which is of limited value as an indicator of social organisation¹⁴.

On the basis of anecdotal insight, anthropologists since long are aware of the difference in elaboration of kinship systems on different evolutionary levels. They had observed that clan organisation (i.e., extended and corporate lineage organisation) tended to be absent both in the simplest and most complex forms of social structure. Focusing on the lower end of the structural complexity scale, Fortes writes: "It seems that unilineal descent groups are not of significance among people who live in small groups, depend on rudimentary technology, and have little durable property" (Fortes 1953:24). Looking at the upper end of the structural complexity scale, Forde (1947:223) asserted that, as societies develop centralised political authority, they create conditions unfavourable for the large, unilineal kinship groups. And Marsh (1967:73) asserts that "in effect, the overall relationship between societal differentiation and kinship solidarity is more nearly curvilinear [than linear]".

¹⁴ The authors recognize that household is an ecological rather than a social systemic term, hence not suitable as a measure of kinship based structure. Blumberg explicitly states that ~~their~~ their hypothesis concerns complexity of familial organization without reference to lineality or clan (Blumberg 1971:900), due to lack of data. Since the present study in principle relies on a similar set of data, ~~the data base~~ we cannot fully understand the exclusion of kinship types in Blumberg's study because descent is certainly the most relevant indicator for familial complexity.

Our own empirical results confirm the curvilinear hypothesis. As shown in Exhibit 4-2, the complexity of kinship organisation must be interpreted in connection with the structural complexity of a society: On the lower and upper end of the complexity scale, kinship systems tend to be limited in their extent; in the middle part, they are highly differentiated. In addition, it is evident that the large geographic and cultural areas differ significantly in their average forms of structural organization. Africa with the highest number of strongly linear cultural units occupies a middle rank position in structural complexity, but is represented in all parts of the graph. All the other areas, either on the lower or higher end of the complexity scale, occupy lower values on lineality¹⁵. Opposite to Sub-Saharan Africa is South East Asia, the region with least extended kinship ties and relatively high *structural* complexity values. The typical kinship system there is ego-centred. Melanesia with the lowest complexity values has relatively extended kinship institutions.

Exhibit 4-2: The curvilinear relationship between structural complexity and lineality.



¹⁵ The cultural units in West- and South Asia also appear on a wide range of extendedness. The average values for the two regions are relatively low because the averages are weighted by the population size of the units. Since larger units have lower values on Extendedness, they strongly influence the position of the region as a whole.

We conclude that indeed a functional relationship between the two variables does indeed exist. But due to the curvilinear shape, it is often overlooked in conventional linear regressions. With structural complexity reaching higher levels, the lineage principle can be expected to become replaced by more ego-centred types of kinship rules. In the positive case, states will gradually get to the position to promote internal conditions which will open up more individualistic options. In the negative case, lineage systems will break down without being replaced by substitutes for the kinship system. Such situations are characterised by increasing socio-economic disparities and cultural distortions. With regard to the adaptation to modernity in general, we postulate that countries with a cultural heritage of high structural complexity and low lineality find themselves in the best position to adapt to, and to compete in, a capitalist world system.

4.3 Kinship II: Male orientation in descent and inheritance

In the previous section, we focused on the extendedness of kinship ties through the ideology of lineal descent. We postulated a conflictive relationship between extended kinship systems and development. In this section, we turn to the relative position of the father's or the mother's side if kinship is formed on lineage basis. We expect that traditional variations with respect to institutionalised preference of the mother's or the father's side will have different consequences for the outcome of the development process.

Within the subgroup of societies with strong lineage organisation, two main forms exist. The most common are the patrilineal and patrilocal norms. In this case, identity and membership of males are transmitted from fathers to sons from one generation to the next. Married women live with the husbands family; girls and women are somehow floating from one transitory existence to the next. As a rule, the bride wealth received for daughters helps to compensate the expenses for the son's wives – or the second wife of a sonless father. Another type, less frequent however, are the matrilineal systems. They are more complicated to describe because in such systems the positions of status and power are still occupied by men. The main difference lies in the fact that status is not transferred from father to son, but from a man to his sisters son. Though men are potential dynasts, the matrilineal conditions are such that men are less interested in their wives and their children than in their sisters and their children. From a child's perspective, the authoritative figure is not the father but the uncle. And from a woman's point of view, her brothers are more important than her husband.

Box 4-1: Localized lineage groups

"The primary effect of a rule of residence is to assemble in one locality a particular aggregation of kinsmen with their families of procreation. Patrilocal [...] residence bring[s] together a number of patrilineally related males with their wives and children. Matrilocal and avunculocal residence aggregate matrilineal kinsmen and their families" Murdock (1949:17) .

Such variations of institutional rules among non-European societies are elaborated in a large number of anthropological monographies. In the next step we test some assumption inherent in the anthropological theoretical discussion. In order to avoid the shortcomings of extensive interpretations of single case studies as well as abstract generalisations from universal cross-cultural studies, the analysis will continue with statistical tests with a view on regional variations. On the basis of the available data, the matri- or patri-orientation of the cultural systems can be measured in four different fields: (1) Residence at marriage; (2) major descent rule: patrilineal, matrilineal or cognatic; (3) succession on the office of local headman; (4) inheritance rule for real property.

Exhibit 4-3 shows the correlations among the four indicators of the concept.

Exhibit 4-3: Patrilineal orientation

Name of variable	Var. in annex 2	The variable stands for ...	1	2	3	4	5
Residence at marriage	18	... Lineage bias in family life	—				
Inheritance rule for real property	19	... Lineage bias between generations	.52	—			
Succession on office of local headman	20	... Lineage bias in power management	.30	.31	—		
Rules of descent: patri- vs. matrilineal	17	... Lineage bias in social status	.68	.66	.31	—	
Socio-political differentiation (SPD)	12	... structural complexity	.16	0.09	n.s.	0.20	—

The four variables have in common that they measure the rules regulating who is entitled to receive valued goods when circumstances call for a shift in ownership. The coding opposes transfers along the patri line as against the matri line with other forms lying in between. The variables are strongly and significantly linked to one another. Higher values mean "more patri- than matri-oriented rules"; a positive correlation, e.g. between "Residence at marriage" and "Inheritance rule for real property" means: "the higher residence is patrilocal, the more inheritance of landed property follows the patri-line. In addition, the table includes the correlations with the socio-political differentiation of the traditional cultural units. On a first glance, it appears that there is a slight tendency, only partly significant, that patri-oriented rules become more frequent with increasing structural complexity.

The high correlations indicate that specific normative principles tend to get applied consistently in more than one sphere of social life. If membership is transmitted from father to son, the same applies to wealth after the death of a parent, the place of residence of young couples, or the transfer of political authority. The observations lend credit to both, the voices who argue that cultures tend to establish internal normative consistency (for them, the proof lies in the strong correlations) as well as to those who point to differentiation, plurality and room for agency within social groups (they will find themselves confirmed by the fact that even a correlation of 0.68 implies that more than half of the variation remains unexplained).

Box 4-2: About patriarchy and matriarchy

"There is, unfortunately, a great deal of looseness in the use of the terms matriarchal and patriarchal, and for the reason many anthropologists refuse to use them. If we are to use them at all, we must first give exact definitions. A society may be called *patriarchal* when descent is patrilineal (i.e. the children belong to the group of the father), marriage is patrilocal (i.e. the wife removes to the local group of the husband), inheritance (of property) and succession (to rank) are in the male line, and the family is patripotestal (i.e. the authority over the members of the family is in the hands of the father or his relatives). On the other hand, a society can be called *matriarchal* when descent, inheritance and succession are in the femal line, marriage is matrilocal (the husband removing to the home of his wife), and when authority over the children is wielded by the mother's relatives"

Radcliffe-Brown (1952:22)

We do not intend to propose hypothesis which could explain the differences in orientation here¹⁶. In a development perspective, one would rather like to know whether a formal transfer of status via mother's line – but not with female position holders! – means that women are in a better position than in patrilineal societies. Since cross-cultural analysis allows to test different ideas and hypotheses in a systematic and empirical way, we expect to get some new insights into the question of life chances of women which is as pertinent as controversial.

Two points seem to be well established. First, if the whole complex of lineage orientation is considered, as shown in Exhibit 4-3 and argued by Radcliffe Brown, lineage orientation is a reasonable indicator for social status of women, but only together with other criteria.

Matrilineal descent catches a formal element only and is of limited value if not analysed in its context. Second, the most practical and relevant factors influencing the status of women in a society are the rules of residence (Schlegel 1972) in combination with the rules – and the practice! – of inheritance. Women suffer a lot when they have to move to an unknown social environment, where they have to work under the command of a mother in law who concentrates the emotional energies of their sons to themselves and not to their wife. Women who suffered emotional losses at young age tend in later years to engage their power to enforce respect, since romantic love is not part of the game (Rosenblatt 1969). In this way, women contribute to the reproduction of systems which are unfavourable to them. Instead, if, under pre-industrial conditions, women have the option to live near their own relatives, and in addition are fully entitled heiresses as members of their kin group, then and only then they enjoy autonomy. We expect that in countries with less prominent male bias in the cultural heritage, development will be less gender biased than in countries on the opposite end of the patri-dimension.

Controlling for structural complexity reveals that the kind of lineage orientation is completely unrelated to the evolutionary position of societies. The correlation is zero and non-significant. When the ethnic units are grouped into 5 categories, the proportion of matri-/patri-oriented lineage organisation is identical on every complexity level¹⁷ If we control for the geographic regions, the picture is only slightly more diverse: Only South East Asia (with the exception of the patriarchic Vietnamese lowlanders) appears with lower than average values for patri-orientation.

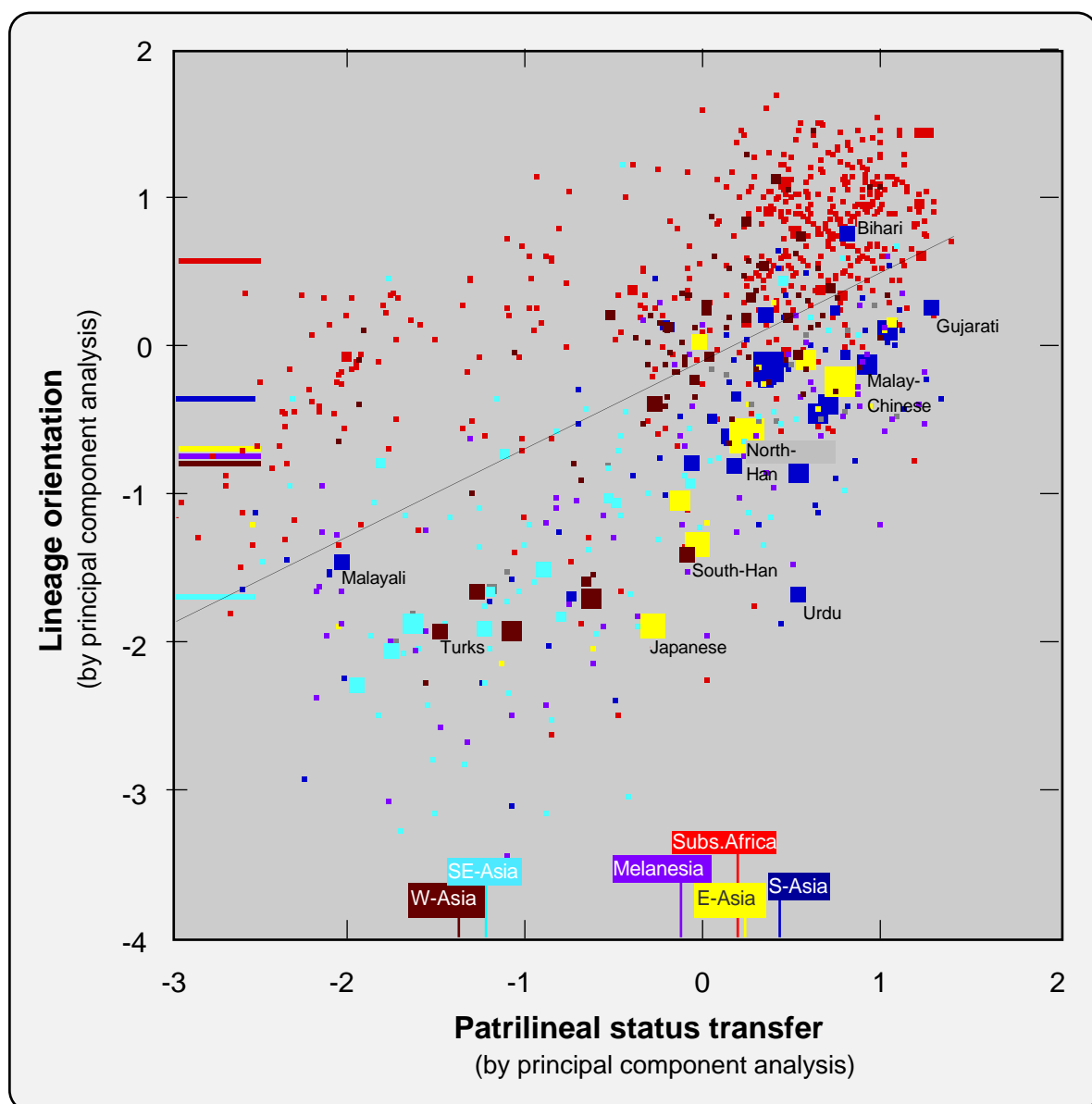
¹⁶ For instance, it has been argued that the conditions under which large familial systems would become either patrilineal or matrilineal were related to the way in which the economy was organized. Tilling the soil with a hoe was generally women's work and, when this activity is the major form of subsistence, the familial system was likely to be matrilineal, especially if the gardens became property handed down from mother to daughter. Tilling became men's work when it was done with a plow with the use of a domesticated animal, so that a patrilineal system was more likely if the economy was based on family-owned fields cultivated by plows drawn by large animals. This "cattle-rearing-promotes-patri-orientation"-thesis has been confirmed in cross-cultural analysis: "Patrilineal descent clearly reflects the domestication of large animals, as is shown, by its occurrence among 77% (13 out of 17) of the pastoral societies of our sample, as well as by the attested importance of large domesticated animals of 21 of the 44 agricultural-mercantile societies which are patrilineal" (Murdock 1972:275). It is to note here that a strong patri-bias is a very general phenomenon. The cattle factor argument holds only when the proportion of patri-biased institutions among cattle holders lies significantly above the anyway dominant pattern in all societies, regardless whether cattle holders or not. According to a rival hypothesis it is geographic mobility into enemies's land causing increase risks of external conflicts which tend to produce matri-oriented institutional rules (Divale 1984). This is a particularly interesting idea because institutional systems often survive under conditions quite different from those under which they originate.

¹⁷ The result does not apply for the lowest quintile: It is well known that the hunters and gatherers are not organized in lineages. They are no exception to the rule, but should be excluded from the analysis because the question does not apply.

We may conclude, therefore, that under pre-modern conditions the preference for the fathers or mothers side represents an indicator of life style. Irrespective of the structural complexity of a society, the norms regulating residence, inheritance and descent can take any possible shape. Whatever the preference, there is a tendency to apply the principle consistent in more than one cultural domain. A short glance at the dynamic change of the gender relation in Western industrial countries seems to indicate that the social randomness of patri- or matri-orientation continues. Neither principle has any influence on international competitiveness, but of course plays an eminent role in individual identity construction.

As for the geographical distribution of this element of the cultural heritage, the two indicators discussed so far – the relevance *and* orientation of extended kin ties – are analysed in one graph (Exhibit 4-4).

Exhibit 4-4: The opposite of patriarchy is not matriarchy, but ego-centred networks of descent



The large majority of traditional societies show a patrilineal bias, and if so, they are organized along lineage principles. Besides, one can observe remarkable differences. The Chinese appear clearly on the patriarchal side. Their lineage organization, however, is less elaborated in comparison with Africans who, in the average, are most strongly embedded in extended kinship ties. Opposite to the African cluster, the cultural units in Southeast Asia are characterized by matri-orientation, combined with weak lineage organization. An astonishingly high internal heterogeneity is found in the South Asian region (dark blue): Such different groups like the patrilineal Bihari; the patrilineal Urdu with weak lineage organization; the matri-oriented Malayali (Kerala) are all represented in the area. In a world-wide comparison, shifting away from patriarchal orientation tends to loosen the lineage principle. Certain African cultural units are an exception to the rule. Only in some African regions – together with a small number of South East Asian tribes – one finds a substantial number of ethnic societies which combine extended lineages with matri-oriented transfer of status and wealth (the units in the upper-left part). Melanesia, a region which is usually mentioned in one breath with Sub-Saharan Africa when structural complexity is involved, exhibits a separate pattern.

It should be noted that high values on patri-oriented norms always imply patriarchy. The opposite does not hold: Low values on patri-oriented norms rarely signify the same kind of order with an opposite sign. Absence of patriarchy does, however, not mean matriarchy, it rather indicates non-lineal, ego-centred "cognatic" systems. These societies, typically located in the South East Asian region like the Burmans, Siamese, Javanese etc., are found on the lower left part of Exhibit 4-4. On the other side, the exponents of the large South and East Asian peoples with overall patriarchal traditions exhibit an unexpected high diversity. Among the "Indians", the Bihari, Gujarati, Urdu and Kerala people show completely different configurations in terms of extendedness of kinship ties and lineage orientation. Among the East Asians, the picture is slightly more homogenous. But the differences between, for example, the Japanese and Malay Chinese, are still noteworthy.

This cursory search for regional differentiation makes clear that the "non-European world" is a very colourful notion. This part of the world is not only heterogeneous in terms of economic and political development. Its diversity of the cultural heritage is impressive as well. Regions tend to be relatively homogenous within and heterogeneous between them. Although "Sub-Saharan Africa" has her own characteristics which are different from other regions, it is as rich in variations of matri- and patri-types as it is in structures of kinship.

4.4 Settlement patterns – the "bio-indicator" and the basis of structural complexity

In the following, we are going to discuss the role of sedentary forms of agriculture (not to be confused with our indicator of agro-technical complexity). It may astonish that "agriculture" was not introduced in the previous chapter as a measure for structural complexity. However, despite its pre-eminent importance for food production, agriculture as such is a very weak indicator of structural complexity. Agriculture is not a feature of higher social complexity: There are a great number of structurally simple ethnic societies with low density of population depending on agriculture, which exhibit a semi-nomadic or semi-sedentary life style, complementing the food production by hunting and gathering. If ethnic groups are analysed without taking the number of the population into account, then these small units dominate the picture. As a result, the correlation between agriculture and structural complexity is close to zero (Exhibit 4-6, black trend line).

In order to get a clearer picture of the type of agriculture, the information about the role of agriculture in the total production of subsistence has to be complemented by two variables: the settlement pattern and the contribution of husbandry to the agricultural production. If

animal husbandry is important and the settlement pattern nomadic, a middle level of food production (e.g. 50 – 70 percent) points to quite a different type of society than when the same amount of food production is combined with near absence of animal husbandry. The correlations between the three elements are presented in Exhibit 4-5:

Exhibit 4-5: Three Indicators of agricultural type

Name of variable	Var. in annex 2	The variable stands for ...	1	2	3	4
Contribution of animal husbandry	21	... low natural bio-massproduction	—			
Contribution of agriculture	22	... non-extractive subsistence economy	-.50	—		
Settlement pattern: Sedentary vs. nomadic	23	... life style	-.53	.68	—	
Sociopolitical differentiation (SPD)	12	... power potential	.26	.11	.07	—

It comes as no surprise that the three variables for the agricultural type are highly interrelated. More noteworthy is the fact that both, the "agricultural complex" and the "nomadic-herding complex" at the other end of the scale, are only loosely correlated with structural complexity (SPD). As mentioned above, this result points to the high dependence on agriculture not only of complex societies, but of small and semi-sedentary groups as well.

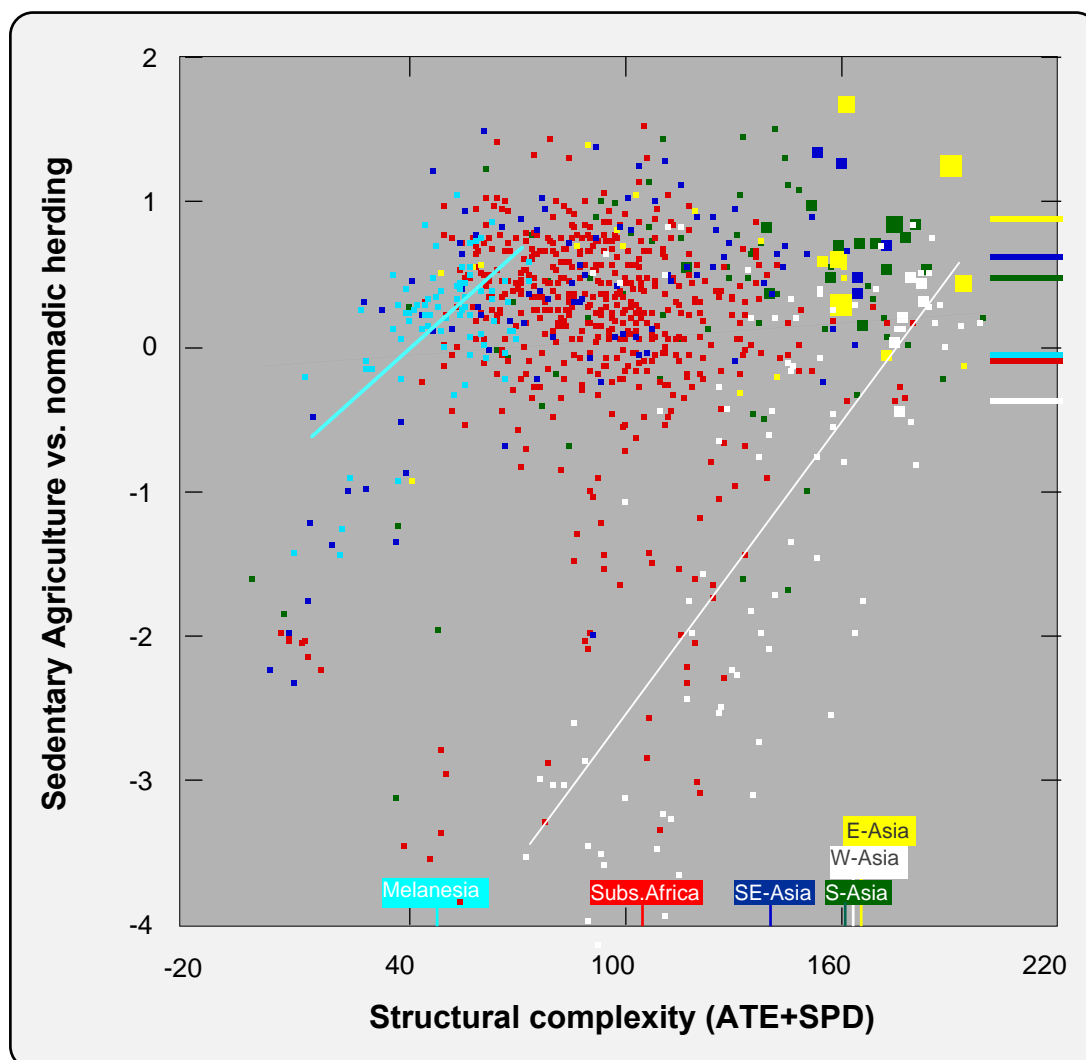
This overall picture is to be modified by important regional peculiarities. In Sub-Saharan Africa, the large majority of ethnic groups live a sedentary life, relying heavily on agriculture. The remarkable and characteristic mark of the Sub-Saharan region is their relatively low structural complexity – relative to agro-technical efficiency. The anomaly becomes fully visible when Sub-Saharan Africa is compared with South, East and South East Asia. In these Asian regions, *local* societies are of about the same structural complexity as Sub-Saharan Africa. Yet, the overwhelming majority of the Asian tribal populations found themselves integrated into large and complex political systems by regional powers in pre-colonial time already. In Sub-Saharan Africa, the same took place, on a large scale, only after the advent of the European colonialists. The consequence of these differences for development are quite substantial.

There are two exceptions to this regularity. One is West Asia including North Africa, the other Melanesia. In terms of structural complexity, they mark opposite extremes with West Asia at the high, Melanesia at the low end. But in both areas we note a strong and significant correlation between the respective structural complexity and the role of agriculture in the local subsistence economy. This is all the more remarkable as the respective ecological conditions and type of agriculture have nothing in common. West Asian agriculture is characterized by a predominantly dry climate with irrigated agriculture since millenia. Sociologically, the region is characterized by the conflictual relation between sedentary farmers, urban citizens and nomadic herders. The positive correlation documented for this region in Exhibit 4-6 reflects the relative weight of these three modes of production in the local economy. The Melanesian subsistence economy could not be more different. Though people nearly fully depend on agriculture, the agricultural system is of a wholly different type, often combined with extractive activities (fishing, hunting, gathering) in an arborous environment. In the past, Melanesian groups lived in secure distance from urban or trading groups comparable to the

Western Asian type. The fact that the correlation between agro-technical efficiency (ATE) and socio-political differentiation (SPD) are of about the same order could make forget that the *range* of the variables involved is much narrower in Melanesia than it is in West Asia. Such differences should be taken into account when identical correlation values are to be interpreted.

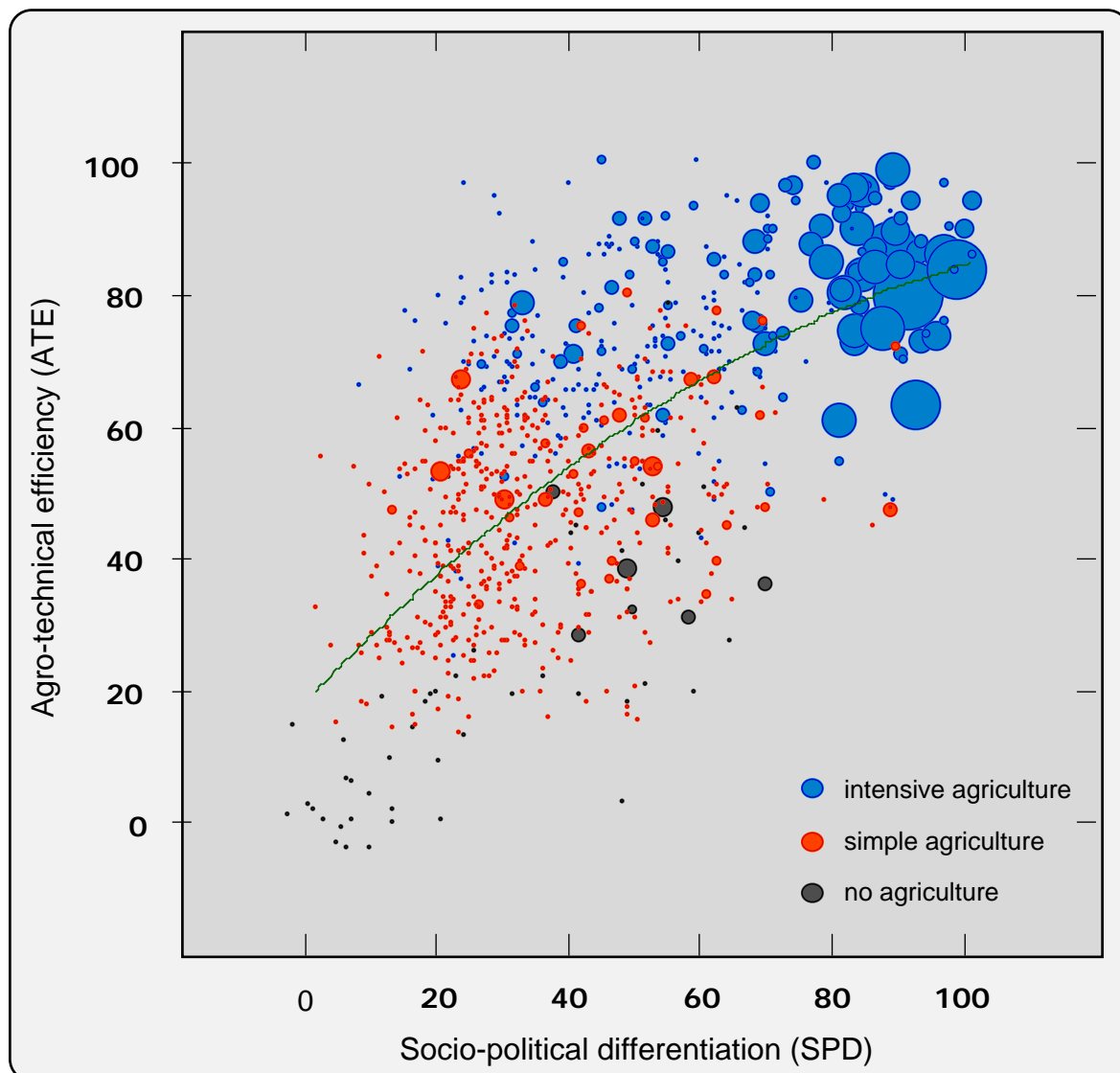
The West Asian situation merits some further consideration because the culture of nomadic herders had and still has some influence upon the social and political structure of the region. Since agriculture was invented and the density of population increased correspondingly during the last millenia, nomadic herding has developed into a highly specialised agricultural technique under difficult ecological conditions. It is found in areas with limited biomass production due to insufficient humidity, temperature or other factors relevant to plant life. Since cereals or tubers cannot be grown in such areas except in oases, human life to a great extent depends on roaming animals who can make use of the low-density vegetation.

Exhibit 4-6: Correlation between sedentary agriculture / nomadic herding and structural complexity



Nomadic herding is an interesting indicator for other reasons as well. First, human adaptation to dry ecological conditions has created highly specialized cultural types, not only in West Asia and North Africa, but also in Mongolia and Inner Asia. Though in the past, the proportion of people, living in these wide areas was naturally limited, certain features of this cultural style had a deep impact on the history and culture of sedentary peoples from Europe to China. It also found a strong expression in the religion of Islam. Secondly, nomadic herding represents something like a "cultural bio-indicator". We may know nothing of the ecological conditions under which a population lives. But when nomadic herding is contributing a substantial portion to the caloric intake of a group, certain parameters of their existence such as low population density, pronounced patrilineal lineages, slavery, polygyny, to mention just a few, will be more probable than others.

Exhibit 4-7: High structural complexity depends on high agricultural intensity



Whenever correlations appear with nomadic herding, the two aspects of the indicator should be considered. Sedentary agriculture and nomadic herding are of interest because the mix between the two determines, to a certain extent, the potential for socio-political differentiation. Sedentary agriculture is usually an intensive form of production, which is not the case with semi-nomadic agriculturalists, in particular when agriculture is performed in combination with animal husbandry. Intensive sedentary agriculture seems to be a necessary but not sufficient

condition for socio-political differentiation (Exhibit 4-7). High levels of SPD are not possible without intensive agriculture. But many ethnic groups combine intensive agriculture with medium or low SPD. Such is often the case either in areas far away from old centers of civilization, or in areas with rigid ecological limits. These observations, of course, are valid under preindustrial conditions only.

4.5 Division of labor between men and women in subsistence production

Societies differ in their conception of what is men's or women's work. In one society, women are the ones who look after the cattle, in the next society they are not allowed to. Esther Boserup, in a famous book on the effect of the traditional division of labor on the role of women in modernizing societies, found that the proportion of women in different economic sectors in developing countries systematically varies with the economic roles they occupied in traditional society (Boserup 1970). She also found that women in the tropical forest areas show a particularly high involvement in agricultural work. Her analysis was based on official statistics and case studies. She did not consider anthropological data measuring the gender-specific division of labour at an earlier time.

It is often presumed that the traditional gender roles of the subsistence economy have a great influence on the way women participate in the modernizing economy, or have a bearing on how gender-sensitive concerns are considered in the political arena. But to which degree does this presumption hold true in a systematic empirical test? In order to find parts of the answer, we analysed to the extent which men and women were differently involved in economic activities, in the past. This gender-comparison is based on the following activities of traditional economy: agriculture, animal husbandry, and the extractive activities of gathering, hunting and fishing. These five activities do not play the same role in all societies but can be systematically compared in a scale ranging from "males do the job alone" to "equal participation" to "women do the job alone". The relative contribution of men and women to these five activities were coded in a simple three-point scale for the two most important subsistence activities in each society. The index does *not* measure the relative weight of women's or men's contribution in working hours spent, but measures the difference in ascriptive involvement of one sex relative to the other. In certain African ethnic groups, for example, women are markedly more involved in the agricultural production than men. In the Arab world, men are over-represented. In both cases, the measured value for gender-biased participation would be identical.

Exhibit.4-8: Correlations of gender bias in work

Name of variable	Var. in annex 2	1	2	3	4	5	
Male dominance in gathering	24	—					
Male dominance in hunting	25	n.s.	—				
Male dominance in fishing	26	-.10	.12	—			
Male dominance in animal husbandry	27	-.24	n.s.	n.s.	—		
Male dominance in agriculture	28	(-.10)	n.s.	.15	n.s.	—	
Sociopolitical differentiation	12	n.s.	n.s.	n.s.	-.24	n.s.	—

The statistical analysis reveals two important findings. First, the norms regulating the relative contribution of men and women are not consistently correlated. Knowing that one sex is more

responsible in a specific sector (e.g. in agriculture) does not allow conclusions as to the responsibilities in another sector (e.g. animal husbandry). In other words: with respect to the five sectors analysed, we find no systematic configuration or pattern of gender-specific division of labour. The second remarkable fact is that the gendered division of labour is not related to the societal complexity except in the case of animal husbandry. In human evolution, the relative contribution of men and women to subsistence production characterizes cultural style. Though we expect that this remains unchanged in modern development, the value system behind the traditional institutions for gender-specific labour division may well have an influence on social development.

4.6 Conclusions on the distinction of core culture and cultural style

In the previous chapters, we were looking for systemic properties of traditional social organisation. In order to penetrate beneath the surface of singular descriptions, the approach was comparative, focusing on *regularities* in the institutional configurations of societies. Cultural diversity, in this view, means diversity of institutional sets on two dimensions, namely different degrees of structural complexity, and diversity of styles within the same level of complexity. Culture so defined constitutes the reference system for construction of the individual identity, individual and corporate strategies to pursue social goals, and personal individuation.

In common perception, culture,, is an ambiguous term: On the one hand, it is identified by the particularity of language, religion or tradition which are separated and independent from the world of economy and societal power. On the other hand, the intuition is that, under a long time perspective, "culture" must be at the root of all human development. Our approach as social scientists was developed in the intention to bringing the two aspects together. One part is the *core culture*, the traits of culture that constitute the elements of evolution and survival of societies in a long term evolutionary perspective. The other part is the *cultural style*, on any elements of culture we find in all stages of societal evolution but which do not develop momentum in this process.

In a systematic empirical comparison of traditional societies in African and Asian countries, this concept has proved to be salient. *Structural complexity* grasps the elements of the core culture as the evolutionary momentum of societies in a universal perspective. The other part of the culture, the *cultural style*, allows us to distinguish the elements which are not related to growing productivity and the power potentials of society. The low correlation indices in exhibit 4-8 give empirical evidence that the distinction between the core culture and the cultural style is significant

Exhibit 4-9: Structural complexity and cultural style of ethnic units (indices only)

		SPD	ATE	POP	PATRI	LIN	GENDER	NVZ
Structure	SPD	—						
	ATE	.58	—					
	POP	.60	.56	—				
Style	PATRI	.15	.25	.13	—			
	LIN	.09	.27	.13	.55	—		
	GENDER	.11	0.07	n.s.	n.s.	n.s.	—	
	NVZ	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	—

Of course, our analysis is neither sufficient nor intended to identify the whole range of institutions determining the cultural style: all comparative work is methodologically restricted to compare the better elements that exist in a sufficient part of the analysed units. Nevertheless, among the cultural institutions analysed we find important ones that are at the centre of anthropological interest. The fact that the institutions of the cultural style do not contribute to competitive evolution does not signify that they are socially irrelevant. As with the example of kinship, they include institutions that represent widespread and deeply rooted patterns of distribution and social integration.

Our *conclusion* with regard to the relation of the core culture and the cultural style is twofold. From an evolutionist macro-perspective, we can say: *culture matters, but only in part*. The fact that only a few identifiable elements of the culture are at the core of societal evolution is important for the past as well as for the future. Structural complexity is the key of growing productivity and of the societal power potential in the past. But it also constitutes the heritage with which traditional societies enter the process of modernisation. In the next part of this report, we shall give an account on the role of the core culture in developing nations in Africa and Asia.

From a society- or country-specific perspective, we can say: *core culture matters but not for everything*. The increase in productivity and power potential is important with regard to long-term competitive survival but, as we argued, often to the disadvantage of many people and of many generations. In all societies, elements of the cultural style are complementary to the core culture. They seem to be particularly relevant for the basic societal functions of social integration, normative orientation and distribution. This opens up new perspectives on the actual situation of developing countries and their problematic relationship between tradition and modernity.

Before assessing the effects of the cultural heritage on modern empirical development, the aggregation of the variables from the ethnic to the national level will briefly be presented.

5. From the local to the national level

Anthropology stayed for a long time outside the comparative analysis of modern development. Unfortunately, the rich knowledge about non-European ways of life did not enter the dominant discussions for several reasons. The knowledge and the restrictions of traditional life were considered to be obsolete vis-à-vis the high promises of the modernisation project. The anthropologist, moreover, specialised in case studies on the local level. The national level, if considered at all, appeared as a threatening cultural autonomy and diversity. Also methodological problems are unresolved. One is to define descriptive categories which allow to compare the extremely diverse institutional configurations found in the different parts of the world. This hurdle was overcome by American Anthropologists who developed an "Outline of Cultural Materials" and an "Outling of World Cultures" for global comparison (Murdock 1982; 1983) and were coding more than 1000 ethnic units – mostly non-European – all over the world (Murdock 1967). The other methodological problem was to aggregate local information on the national level. Only by bringing together the two sets of data, ethnic and national, on the same analytical level made statistical analysis on the *links* between the two possible. Such a combined data bank was published for the first time in the ATLAS (Müller 1999).

5.1 How anthropological information is transformed into national indicators

Ethnic data indicate country variance with respect to traditional cultural patterns. The problem to face is how to deal with cultural pluralism when the aim consists in generating *one* figure to be used for cross-cultural comparison. In this study culture is defined as the degree of

variation in the cultural characteristics of ethnic units in a nation. The critical empirical problem in this definition are the identification of what we call "ethnic units" and the description of their cultural characteristics in quantitative form. The procedure includes (1) the identification of the ethnic units and their population size; (2) the ranking of categorical variables and (3) the aggregation of the variables on the national level. The three steps are shortly described in the following.

The identification of the ethnic units and their population size

Since each country should be described in ethnological terms, first we needed to identify as many of local cultural units as possible, beginning with the largest. In this way, in nearly all of our 87 countries at least 95% of the population in 1960 could be identified for their ethnic background (with the great exception is Papua New Guinea where only 47 percent are identified).

The cultural units are alike empty baskets, built up of three elements: a name, a location, and a population size. In most cases, the name is given in conformity with the Human Relations Area Files (HRAF), the largest and most comprehensive world-wide documentation of ethnic units developed by the Yale University. For the population size, many sources were used. But the most important is the "Atlas Narodov Mira", a world atlas on ethno-linguistic groups, produced by the Academy of Science of the former Soviet-Union. The great advantage of this Atlas for the purpose of the present study is the fact that the population data refer to 1960. This date coincides with the beginning of the first development decade of the United Nations. It also marks the baseline of our cross-national analysis. The geographic location of the culture bearing units on the maps indicates the area where most people of the group are living. Where cultural units are divided by national borders, the figures are split and the relative proportion attributed to the respective countries¹⁸.

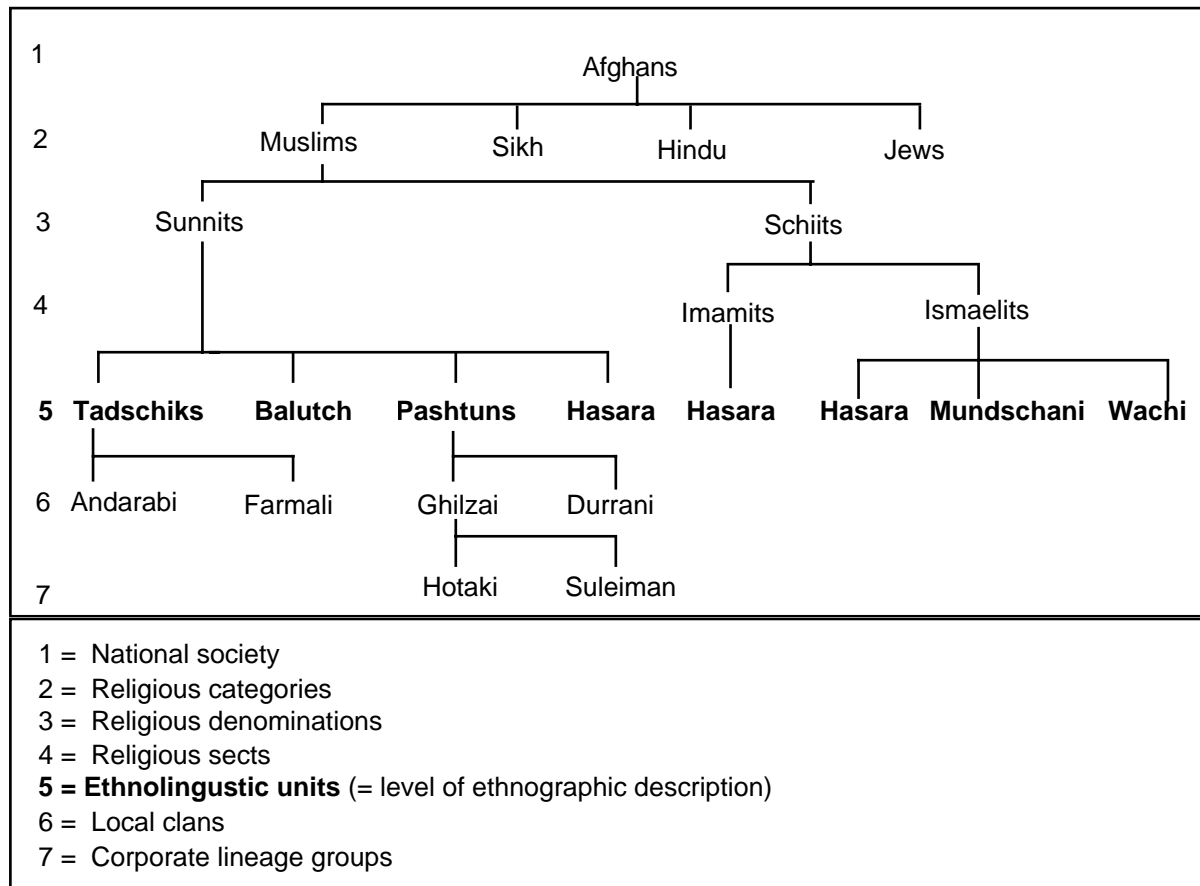
First it must be emphasised that the objective of the start-up documentation is not to document ethnic groups or lend scientific legitimisation to any kind of ethno-nationalist claims. Its aim is to describe the cultural diversity of contemporary nation-states by ethnographic variables, illuminating the pre-national past. "Ethnographic" therefore refers only to a non-national type of social organisation and to the local level. When we talk of such groups, we will use the term "cultural units" whenever feasible, to make the distinction clear. The definition does not give the slightest hint of the possible existence of "ethnic" consciousness or identity.

The identification of cultural units is often based on subjective judgement. The problem was described as one of the most tangled areas in ethnological taxonomies, in which "one man's tribe is another man's super-tribe and a third man's sub-tribe" (Fernandez, quoted in Morrison 1972:418). Exhibit 5-1 demonstrates the problem using the example of the cultural diversity in Afghanistan. The Afghan population can be grouped along four different principles: Religion, Politics, Language, Kinship. As usual with literal religions, the largest grouping results from religious criteria. As a rule, religions define larger cultural areas than spoken languages (see map 5 and 7). With the exception of the Hasara speaking groups, language differentiation appears within the same religious groups. Only the Hasara speaking belong to all three Muslim denominations, the Sunnis and Ismailis may be one of the reasons why these "ethnic" groups are still today able to play such a prominent role in Afghan politics. The levels 2 to 5 are candidates of an "ethnic" typology of the Afghan population – but which one to chose? And why? And should the same principles (like "religion first", or "language first" etc.) be applied in all countries if we think of cases like Sri Lanka, Lebanon or Burundi, or has a pragmatic approach more merits? In our study, the ethnic distinctiveness is assessed not schematically

¹⁸ For more details see annex 6 and the links mentioned there.

on one single criterion, but in terms of a range of different elements including the dominant subsistence production and other variables of the total set of criteria.

Exhibit 5-1: What cultural unit is the real one? The example of Afghanistan



The ranking of categorical variables

Primary colours cannot be compared in quantitative terms. But wave lengths can. For statistical analysis, all cultural variables have to be transformed into quantitative variables of at least an ordinal or ranking scale. It means that different categories of a variable must stand in some kind of relation to each other like: higher, lower; more, less; better, worse etc. Only if the descriptive codes of anthropological data can be ordered along one or several theoretical dimensions, they become accessible to quantitative treatment.

Many of the codes in the Ethnographic Atlas (Murdock 1967) are already arranged with a quantitative dimension in the background. "Settlement Pattern", for instance, has the following categories: 1 = nomadic or fully migratory (4 %); 2 = seminomadic (3 %); 3 = semisedentary (4 %); 4 = compact but impermanent settlements (2 %); 5 = neighbourhood of dispersed family homesteads (13 %); 6 = separate hamlets, forming a single community (11 %); 7 = compact and relatively permanent settlements (46 %); 8 = complex settlements (3 %). The ranked variable "Sedentary way of life" maintained 5 ranks, i.e. 1 to 4 as in the original codes and rank 5 including the categories 5-8 standing for permanent settlements. Other variables had to be ranked from the scratch. Details are given in Müller (1999).

Weighting cultural groups on the aggregated national level - the case of Sri Lanka

In principle, the national value of a variable is the average of the coded values of the local ethnic groups. Based on the simplifying assumption that the social situation of a country is

more influenced by groups with a high proportion of the national population than by proportionally small groups, the ranked codes were demographically weighted. In this operation, the original information linked to the local units gets lost in favour of the new national value – a value, which can now be compared with the values of other countries.

The case of Sri Lanka may serve as an example. The aggregated value in this country is based on seven "ethnic" groups of different size. The ranked and weighted codes of the these seven units make up for the national value, e.g. of settlement pattern. The example is chosen for the commentary which is given in the national census on the definition of the ethnic groups. It says: "The ethnic group of any individual recorded at the census, is the one declared by the person as his ethnic affiliation. The ethnic group of a person of mixed parentage was taken to be that of the father, at all censuses. Ethnicity is one of the items on which information has been collected from all the censuses since 1871. However, different terminologies were adopted at the earlier censuses. At the first census taken in 1871 and until 1901 the word 'nationality' was used. The word 'race' was used in place of 'nationality' in the 1911 census. The census reports up to 1891 have classified the population into eight major ethnic groups: Sinhalese, Tamil, Moor, Burgher, Eurasian, Malay, European and other. The censuses taken from 1901 to 1971, separated the Sinhalese into two sub groups called the Low Country Sinhalese and the Kandyan or Up Country Sinhalese. The censuses taken since 1911 separated the Tamils into two groups called Sri Lanka Tamils and Indian Tamils. The Moors were also separated as Sri Lanka Moors and Indian Moors. Since the 1963 census the Vddhahs and the Europeans who were rapidly loosing their numerical significance as ethnic groups in Sri Lanka were not enumerated separately and were included in the 'others'.

Exhibit 5.2: Aggregating ranked codes of cultural units: The case of Sri Lanka

Ethnic group	Number	Percent
All ethnic groups	14,846,750	100.0
Sinhalese	10,979,561	74.0
Sri Lanka Tamil	1,886,872	12.7
Indian Tamil	818,656	5.5
Sri Lanka Moor	1,046,926	7.0
Burgher	39,374	0.3
Malay	46,963	0.3
Other [like Vddhahs]	28,398	0.2

In the case of Sri Lanka, the typology and grouping of the different ethnic groups has been changed by the administration in the course of time. The problem discussed under section 5.1 becomes visible here as an inconsistency in administrative practice. To treat the Sinhalese as one or two groups does influence the value of the variable measuring the sizes of the cultural units. But it will not – and this is the decisive point – influence the aggregated value of any other variable as long as the coding of the split or amalgamated cultural groups remain unchanged. The example also demonstrates why ethnic identity can be ignored in this report.

5.2 A typology of nations based on structural complexity and cultural style

The theoretical differentiation proposed in this report is inspired by the empirical analysis of the cultural heritage in the non-European world. Among pre-modern societies, we could detect "free" cultural elements, i.e. institutional variations that are not connected with structural complexity. As mentioned above, the number of such traits is probably very large,

but has to be restricted, in the approach of the present analysis, to those which are well documented world-wide. Three cultural areas were analysed: (1) Variations in the traditional socio-political organisation ("structural complexity"); (2) variations in the traditional kinship organisation ("familism", "lineage organisation" and "gender orientation"); (3) variations in the kind of subsistence economy and, on the national level, variations in homogeneity and religion.

Based on these criteria, an empirical typology of the cultural heritage of nations can be constructed. Two distinct and broad cultural complexes can be distinguished: on the one hand, different configurations of nomadic herders with a tendency to patrifocal kinship organisation and the Islamic religion (with one remarkable exception: Mongolia); on the other hand, configurations of agriculturalists on different technological levels. It should be noted that the distinction between pastoralism, based on animal converters, and agriculture, based on vegetable converters, first of all reflects adaptations to different environmental conditions, not different stages in cultural evolution.

These two general adaptive types appear in a large number of cultural forms. Based on preliminary analysis (Müller 1996), we suggest a grouping of nations on a medium level of differentiation. The result is shown in table 5. The figures attached to the sample countries indicate the value calculated for the socio-political differentiation (SPD):

Exhibit 5-3: The cultural heritage of nations, criteria for a typology

1 Tropical Africa and Melanesia with low to medium structural complexity

<i>Example</i>	<i>SPD</i>	<i>Subsistence</i>	<i>Kinship</i>	<i>National Homogeneity</i>	<i>Religion</i>
Papua NG	8	agriculture	mixed	low	Christian
CentrAfrRep.	10	agriculture	patrilinear	medium	animistic
Gabon.	14	agriculture	patrilinear	medium	Christian
Congo	14	agriculture	matrilinear	medium	mixed
Zambia	21	agriculture	matrilinear	low	animistic
Ghana	41	agriculture	matrilinear	medium	mixed
Benin	43	agriculture	patrilinear	medium	animistic
Rwanda	52	mixed	patrilinear	high	Christian

2 Countries of the arid and semi-arid zone with low to medium structural complexity

<i>Example</i>	<i>SPD</i>	<i>Subsistence</i>	<i>Kinship</i>	<i>National Homogeneity</i>	<i>Religion</i>
Mali	34	mixed	patrilinear	medium	Islamic
Mongolia	39	livestock	patrilinear	high	Buddhist
Saudi Arabia	59	livestock	mixed	high	Islamic
Libya	71	mixed	patrilinear	high	Islamic

3 Asia: Structural complexity from high to very high

<i>Example</i>	<i>SPD</i>	<i>Subsistence</i>	<i>Kinship</i>	<i>National Homogeneity</i>	<i>Religion</i>
Malaysia	64	agriculture	mixed	medium	mixed
Bangladesh	76	agriculture	patrilinear	high	Islam
Syria	80	mixed	patrilinear	high	Islam
Myanmar	83	agriculture	matrilinear	high	Buddhist

The three main clusters are clearly regional and at the same time represent different levels of traditional structural complexity. African countries occupy the lower half of the scale and are

predominantly based on agriculture in forest areas (mostly hoe-technology based on women's work); the countries of the arid and semi-arid zone (including Mongolia) ranging around the lower middle level of complexity, are strongly dependent on livestock, and countries of high structural complexity – a zone extending from the Mediterranean Sea to the Pacific Ocean – depend on cereal agriculture. Within each of the three regional main clusters, various kinds of configurations appear as subtypes.

One question is not treated at this point. By aggregating social information from the local to the national level, anthropological data lose their "splendid isolation". Together with data from other cultural units, they have to be weighted and to be summed up so as to end up as national indicators of the cultural heritage. This raises the question on how homogenous a country is. The larger the number of ethnic units living in a country and the more different they are, the higher the cultural heterogeneity of the country (many units with identical data sets would not make difference to one single large unit). In this study, homogeneity is measured in terms of ethnic, linguistic and religious criteria. More details are discussed in chapter 7.

A final remark

In the following chapters, we analyse the influence of the cultural heritage on modern development of nation states. Not only key-culture (complexity and cultural homogeneity) are expected to play a role but also the cultural style, operationalised in terms of the type of subsistence economy, kinship system as well as religion.

The cultural style is a concept with a plural meaning. Whereas the core culture deals with one dimension only – the potential power of a society in inter-societal competition –, cultural style is diversity *within* comparable levels of structural complexity. This point is important. In our understanding of cultural style, diversity stands under no pressure of increasing efficiency, productivity, or force. Therefore, it should be separated from a diversity of life styles which reflect privileged access to global resources. This individualistic differentiation of life styles is limited to rich countries and classes, depending on continuing power differentials on a global level. In our terminology, such life styles are part of the core culture of metropolitan societies. It is narrowly linked with the structural centre, because it can be reproduced only as long as the continuing absorption of global resources beyond any proportion is guaranteed. Therefore, cultural diversity can be negative and incompatible with the intentions of qualitative development and human rights.

5.3 The countries selected

The selection of the countries of this study is the result of theoretical and pragmatic consideration. This study focus on the link between the cultural heritage and development. It should also bring the non-European countries in the foreground. In a global perspective, it is amazing how sharp the European and non-European world are geographically divided (see Map 4). Only Latin America stands somewhat in a middle position. But the European element is clearly dominating, not necessarily in demographic terms, but clearly in terms of political and cultural orientation of the dominant classes. A few countries had to be excluded for various reasons: Some were too small, which means that even limited external influences have a strong impact on the development process (e.g. the Seychelles or the majority of Oceanian states). An endogeneous explanation in such a case must fail. Hongkong and Singapore were excluded because of their special status as urban enclaves. For the southern fringe of the former Soviet Union, the coding was done for the ethnic units. On the state level, however, no data for comparative analysis are available in sufficient quantity and quality. To a lesser extent, the same applies to many other developing countries. Though they are part of the sample, they practically never appear in the cross-national analysis due to missing values in the national statistics (see list of countries, where these cases are mentioned). Israel had to

be excluded because our methodology was unable to deal with the migrational dynamic of this country. In the case of some small oil exporters, it was decided to keep them in the sample and to control the expected effects from high oil rents by statistical means. Within the selected area, the data from social anthropology are coded for such a high proportion of the national population, that on the national level there are no missing data. Since the same cannot be said of national data, multivariate analysis often presses the number of units entering a test down to 40 to 50 cases.

PART III

CULTURE MATTERS IN DEVELOPMENT

6. Assessing the empirical influence of cultural heritage

Since the ethnological data have been transformed into national-level variables, their significance for socio-economic development can be tested by *cross-national analyses*.¹⁹ This kind of analysis makes it possible to assess the "weight of the past", the impact of cultural traditions, comparatively to other factors like geographical position, oil resources, economic growth or political democracy. Details of the technical and methodological background of the empirical analysis are given in annex 7.

We tested the national variables for 83 countries (see list of countries included in the analysis, annex 1). The former members states of the Soviet Union as well as Namibia, Westsahara and Yemen had to be excluded from this cross-national analysis because of missing or lack of reliable economic and social data for the period under study.

Exhibit 6-1: Assessing the influence of the cultural heritage variables: 4 empirical models and their dependent variables

Model A: LEVEL 1960			
<i>Economic level 1960</i>	<i>Social level 1960</i>		
<i>GDP p.c. 1960 (N=57)</i>	Education: <i>Secondary school 1960 *</i> (N=43)	Health: <i>Infant mortality 1960 (N=56)</i> <i>Life expectancy at birth 1960 (N=56)</i>	Gender: <i>Fertility rate 1960 (N=45); 1970/75 (N=55).</i> <i>Male bias, primary school 1960 ** (N=35)</i> <i>Male bias, secondary school 1960 ** (N=34)</i>
Model B: CHANGE 1960-1995/98			
<i>Economic Growth 1960-95/98</i>	<i>Social Development 1960-1995</i>		
<i>GDP p.c. growth rate 1960-90, 1973-98 (N=45)</i>	Education: <i>Secondary school* (change 1960-85; N=49)</i>	Health: <i>Infant mortality: change 1960-90 (N=54)</i> <i>Life expectancy at birth change 1960-90 (N=54; change 1970-95 (N=71)</i>	Gender: <i>Fertility rate change 1970-95 (N=71)</i> <i>Male bias, primary school change 1960-85 ** (N=39)</i> <i>Male bias, secondary school change 1960-85 ** N=47)</i>

* Percentage of "secondary school attained" of population.

** Primary/secondary school attained, ratio % of female population / % of male population.

¹⁹ For the theoretical basis and background of cross-national analyses see Merrit/Rokkan (eds, 1966), Hopkins/Wallerstein (1967), Elder (1976), Chase-Dunn (1982), Kohn (1987), Tilly (1997), Herkenrath (2001).

In order to assess the influence of the cultural heritage variables empirically, we developed *four empirical models*. As table 6-1 shows the four models are derived from two distinctions:

- the distinction between economic and social dimensions, and
- the distinction between level of development in 1960 and the change from 1960 to 1995.

The following arguments have been decisive for constructing these four different models:

- certain, but not all cultural traditions are relevant for economic growth,
- social development is not necessarily and not in all dimensions a function of economic growth (cf. Easterly 1997)²⁰, therefore some cultural traditions may affect social, but not economic development,
- some cultural traditions may have an influence on country's level of economic and social development at the beginning of this time period, loosing their significance for the further development, and some may affect only the rate of change.

12 VARIABLES OF THE CULTURAL HERITAGE (INDEPENDENT VARIABLES)

12 cultural heritage variables have been tested regarding their influence on economic and social development:

- 3 indicators for societal homogeneity: ethnic homogeneity (PPCT_MAX), linguistic homogeneity (LNG1PCT) and religious homogeneity (RELHOCH1)
- 3 indicators for structural complexity: socio-political differentiation (SPD), agro-technical efficiency (ATE), and the proportions of local religions (RELOC, transformed into a dummy variable RELDUM),
- 1 Index combining structural complexity with ethnic and linguistic homogeneity (CTI_IDX5: SPD + PPCT_MAX + LNG1PCT),
- 3 kinship systems variables: linearity of rules (LIN), patridominant rules (PDR2), familism (FAMIL_A),
- 2 subsistence economy variables: nomadic animal husbandry (NVZ), gender division of labour (R55).

Each of them has been inserted into the four models, with each of the 14 dependent variables.

14 VARIABLES OF THE SOCIO-ECONOMIC DEVELOPMENT (DEPENDENT VARIABLES)

In the economic models the dependent variables are constructed from Gross Domestic Product (GDP, per capita, in international dollars) data, which are widely used in economic growth research.²¹ In the social dimension models we use a broader range of dependent variables. On the basis of a distinction between three main sub-dimensions of social development - education, health and gender - we used six variables, all of them well known in development research:

- Education: secondary school
- Health: infant mortality and life expectancy
- Gender: fertility rate and male bias in education (primary and secondary school).

²⁰ Easterly (1997) finds for a similar time period (1960-90) that effects of growth on many dimension of life quality are "uneven and often nonexistent", and concludes: "The evidence that life gets better during growth is suprisingly uneven" (p. 24).

²¹ Cf. Barro (1991), Barro/Lee (1994), Barro/Sala-i-Martin (1991, 1995).

CONTROL VARIABLES

In each regression estimation we added the same control variables, geographical and ecological factors as well as an indicator for oil resources (OPEC membership). Furthermore, we constructed two variables measuring the political context of national development: the average level of political democracy over the period (the higher the democracy level the higher the value) and the variability of political regimes over the period (the more the regime changes between different democracy/autocracy levels, the higher the value).

7 Core culture matters: Homogeneity and structural complexity

7.1 On Cultural Homogeneity

7.1.1 THEORETICAL INTERPRETATION OF CULTURAL HOMOGENEITY

Homogeneity refers to the internal cleavages of a society, such as different ethno-linguistic units or religions coexisting within a country. It is not a property of the traditional ethnic-units but a dimension that describes ethnic, linguistic or religious compositions of nation states. For many reasons homogeneity differs greatly among nation states. Heterogeneity, the opposite to homogeneity, is often considered to be difficult. As to its effects, two schools of thoughts may be distinguished. On the one hand are the "optimists" (e.g. Rae; Flap 1988) who emphasise that the risks of polarising and of rigid conflicts decrease with the number of conflicting groups. The "pessimists", on the other side, insist that cultural cleavages operate as catalysts for social mobilisation, hence increase the inclination for manifest conflicts. Since they also raise transaction costs and render normative integration and political legitimisation more difficult than would be the case with a culturally homogenous population, economic growth tends to be lower (e.g. K. Deutsch, L. Pye, C. Geertz).

Both positions have their merits, and the empirical studies have produced controversial results. Easterly (1997), for example, point to ethno-linguistic fragmentation as a fixed factor holding back Africa's economy. They come to the conclusion that "Ethnic divisions explain a significant part of Africa's slow growth and Africa's choice of growth-reducing polities". La Porta et al. (1998) however find that: "The negative effect of Ethnic Fractionalization (EF) on government performance generally becomes insignificant once we control for per capita income and latitude. Controlling for how poor they are, ethno-linguistically fractionalized countries do not have especially bad governments." Collier (1999: 293) concludes: "Ethnic diversity is associated with lower growth only in societies where political rights are limited. A similar relationship holds for World Bank projects, which are less successful in ethnically diverse societies with poorly developed democratic institutions. Yet highly fractionalized societies are less likely than homogeneous societies to experience violent conflict that ethnically diverse societies and do not have a higher project failure rate as long as it is fully democratic". In fact: "[A]n ethnically diverse society might gain more from democracy than a homogenous society because the homogeneous society has less need for dispute resolution" (S. 391). Finally, Ritzén/Easterly/Woolcock (2000: 21) argue that ethnic divisions make it difficult — although not impossible — to develop the social cohesion necessary to build "good institutions". They show that more fractionalized societies have worse rule of law.

Ethnic homogeneity has been defined in various ways, most often under the inverse term (with the same meaning) of "ethno-linguistic heterogeneity". Flap (1988) speaks of "social cleavages for principles that divide a population into categories of persons who are mutually prepared or obliged to support each other" and of "variables dividing persons into categories within which persons owe each other help" (Flap, S. 31). The concept which comes closest to the present study defines heterogeneity as "...the extent to which a population is divided

into groups with distinctive cultures and mutually exclusive institutions" (Morrison 1972). The distinction, in this definition, is not between "cultures" in the sense of different collective self-perception, language or religion, but between "groups with mutually exclusive institutions". The same applies to our study where homogeneity is defined objectively in terms of structural complexity, gender definition and so on.

In the cross-national literature, the indicator most frequently used is the "ethno-linguistic fractionalization index"²² of Taylor (1992). Unlike in this report, the index is likely more linguistic than "ethnic" because it neither considers the self definition of groups nor are the objective cultural similarities or dissimilarities taken into account. In the present study, three indicators for homo- and heterogeneity are used: homogeneity with respect to language, religion and ethnic differentiation. All three indicators are constructed in the same way. They measure the proportion (percentage) of people who belong to the largest language group, the largest religious group and the largest ethnic group. Our indicator of "linguistic homogeneity", apart from the negative sign, is practically identical with Taylor/Hudson's ethno-linguistic heterogeneity index ($R = -0.95$).

Comparing the three indicators reveals that religion constitutes the highest level of territorial integration (map 5): In the whole of Asia and North Africa, the large majority of the national populations adhere to one of the large literal religions (Buddhism and Islam). With language, the picture is more diverse (map 5), and ethnic heterogeneity is so general that mapping does not reveal any reasonable cluster.

The difference between linguistic and religious diversity of national populations need some further comment. Religion defines relatively large areas of shared meanings and ritual practice. Compared to language, the symbolic universe of common religion is much more widespread than with languages. Language differences within an area of shared religious beliefs are more common than different religions within an area of common language.

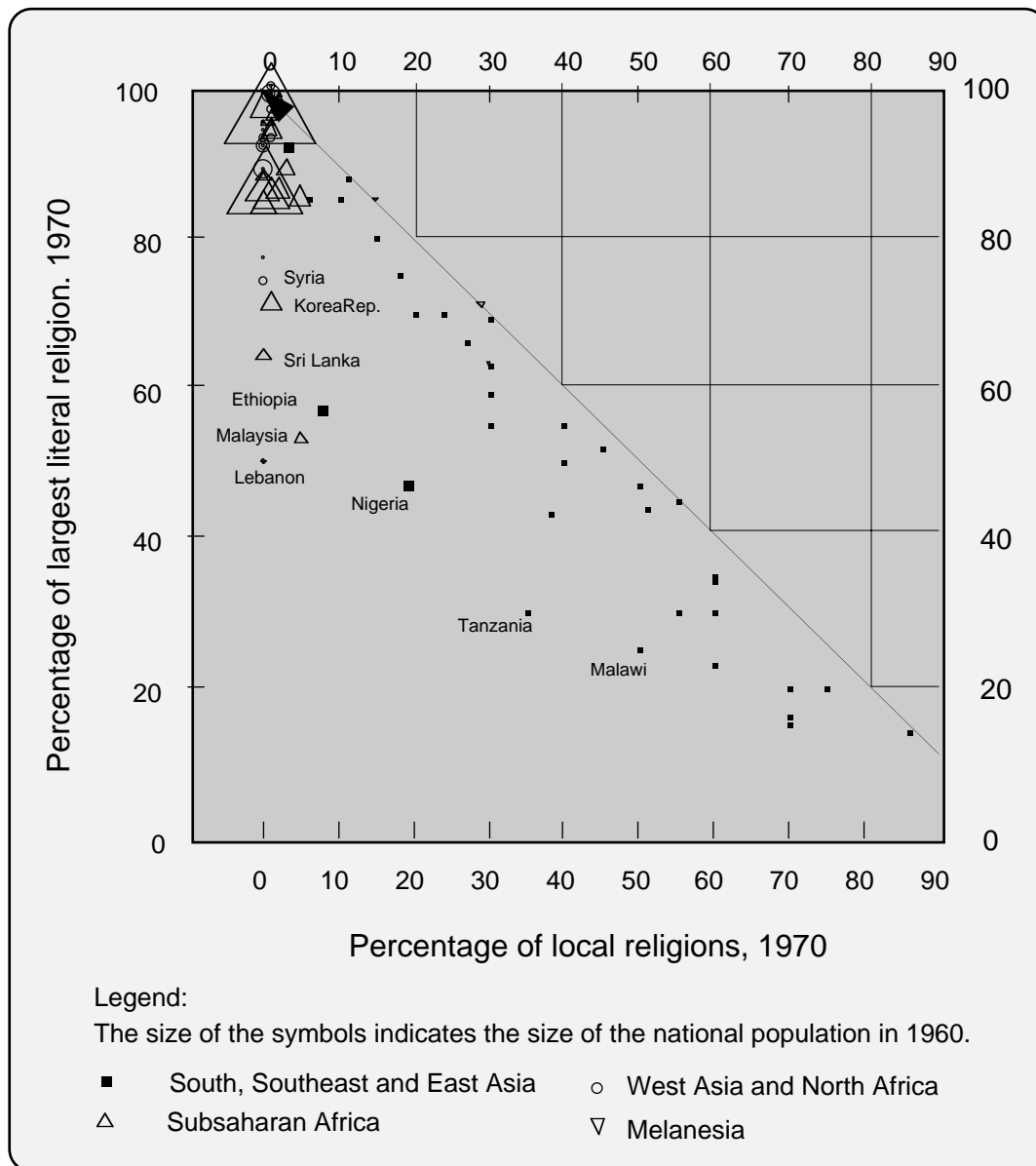
Consequently, countries normally have several spoken languages, but only one dominant body of religion. (Different denominations within a religious stock are not considered here.) In order to measure national homogeneity or heterogeneity in the area of religion, we should come back to the notion of inter-societal competition and the embedding of religion in the cultural core. On the one hand, monotheistic world religions compete with animistic, local or kinship based religions. In this general view, the relevant point concerns the highly universalistic and abstract principles ordinary to all literal religions. If "decontextualisation" of institutional patterns and moral principles is a characteristic of globalisation, then globalisation begun with the prophets of the large literal religions. On the other hand, it is also a fact that we find competition between the "universalistic" religions. That is why our indicator of religious homogeneity does not measure the proportion of all the adherents to world religions (like Muslims, Hindus, Buddhists etc.), but the proportion of the largest single literal religion. This kind of heterogeneity, i.e. competition between religious systems on the same structural level must be distinguished from the situation where a high proportion of a country's population is adhering to local ("tribal", "animistic".) religions. Such religions indicate both, religious and socio-political heterogeneity. Religious universality refers to a past historical situation where literal religions became a part of political centralisation and social differentiation in divinely kingdoms (Siriwardena 1987). The more thorough the colonisation by archaic states in the distant past, or by colonial and postcolonial states in the recent past, the more local religions were replaced by conceptions transcending local social networks. This process has not yet come to an end and probably will never do so. But it has got another

²² Formula: F (=fractionalization index) = $1 - (n_i/N) * [(n_i-1) / (N-1)]$ with n_i = number of speakers in language i ; N = total population of country. the resulting F is between "0" and "1".

competitor in the form of scientific and "secular" science with its "churches" established in the most remote villages by now.

Grouping the non-European countries according to their relative proportions of literal and local religions (Exhibit 7-1) is quite revealing. It allows to grasp a fundamental cultural division of great importance in the ongoing process of globalisation.

Exhibit 7-1: Homogenous and heterogenous countries in terms of religion



On the vertical axis, the proportion of people adhering to a dominant literal religion (Islam, Buddhism, Christianity as the most important ones in our study) is indicated. The horizontal axis indicates the proportion of believers in local cults. In a general way we can say that local religions have been gradually replaced to one literal religion: in the majority of Asian countries nearly completely, in the majority of Sub-Saharan Countries only partially.

There is a concentration of 43 Asian countries – representing more than 80% of the region's population in 1960 – whose inhabitants adhere to the same religion. In countries where the dominant religion absorbs less than 80 %, two different situations can be identified:

- If the complementary religion of a literal religion is of the local type, then the situation is characterised by an indisputable hierarchical relationship. This is the most common case in African countries (small black squares in Exhibit 7-1) with local religions standing under pressure from Islamic or Christian proselytism. These external religions transfer moral codes which are better adapted to high structural complexity than are the cognitive and moral codes rooted in tribal traditions. This also explains why the diffusion of secular education and moral codes from literal religions go hand in hand. Secular successors of agrarian religions may attract highly educated urbanised middle class members in rich Western countries, but not the large majority of people surviving on the basis of informal networks at the margins of weak states. The competition of literal religions is certainly increasing. Till 1960 this development was limited to a small number of countries like Malawi, Tanzania, Nigeria and Ethiopia in Africa, certain West Asian countries, Sri Lanka and Korea in the Asian context.
- If the complementary religion to a literal religion is once more of the "universalistic" type, these polar or tripolar situations are clearly more conflictive, although rare. Only in a few countries like Sri Lanka, Ethiopia, Malaysia, Lebanon, and Nigeria that more than one literal religion cohabit together in substantial proportions. Competition in such situations frequently increases, since world religions are rooted in societies of comparable structural complexity.

It was mentioned that our measure of linguistic and religious homogeneity records the percentages of the most dominant language as well as the most dominant religion in a country. Exhibit 7-2 shows linguistic heterogeneity and homogeneity of nation states. As also can be seen the counting of the different groups by their absolute numbers in a country is not be a suitable indicator for homogeneity.

Exhibit 7-2: The linguistic heterogeneity and homogeneity of nation-states.

Linguistically homogenous countries where the dominant language is spoken by at least 90% of the national population			Linguistically heterogeneous countries where the dominant language is spoken by 30% of the national population at most.		
Country	main language in %	N languages spoken	Country	main language in %	N languages spoken
Korea Rep.	100	1	Papua New Guinea	6	849
YemenPDR	90.9	6	Zaire	7.7	212
KoreaDPR	99.5	2	Cameroon	8.5	269
Japan	99.2	14	Solomon Island	9	65
Bangladesh	99.1	37	Chad	9.8	117
Burundi	98.2	3	Tanzania	12.6	127
Taiwan	98.1	21	Uganda	16	41
YemenAR	98.1	3	Zambia	19.7	37
Egypt	97.8	11	Kenya	20.5	59
Jordan	97.6	6	Nigeria	21.4	413
SaudiArabia	97.0	6	SouthAfrica	21.5	32
MalagasyRep	96.8	3	Togo	22	42
Somalia	96.1	7	IvoryCoast	23.2	72
China	93.9	142	Liberia	23.6	34
Tunesia	93	11	India	25.4	380
Lebanon	92.9	5	GuineaBissa	25.9	22
Rwanda	92.7	3	Benin	26	52
Westsahara	92	3			

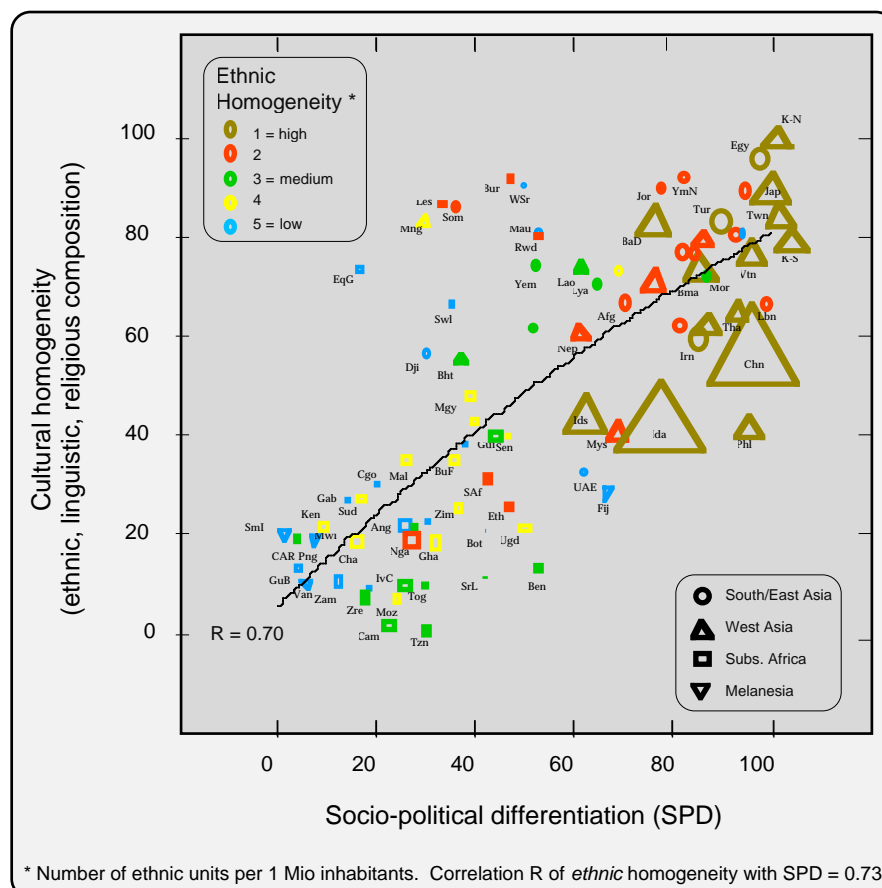
It is remarkable that among the 18 linguistically homogeneous countries, all but Burundi and Rwanda belong to the Asian or Arab group. This is in sharp contrast to the 13 linguistically most heterogeneous countries, all of which (with the notable exception of India) are in Africa, the south of the Sahara. Exhibit 7-2 further shows that larger numbers of spoken languages are not only found in countries of great linguistic heterogeneity, but also in some of the more homogeneous countries, where dozens of spoken languages can be found. The most extreme case is China with more than 140 different languages in 6 % of the national population.

Common language is a good indicator for common history and potential interaction. The more heterogeneous the population of a country is, the smaller is the common ground for symbolic and direct communication and for social mobilisation. Since ordinary law, and political legitimisation depend of shared values, they become more difficult with the increase of heterogeneity. Therefore, the proportion of the largest linguistic community is highly relevant for the process of nation building. Otherwise different countries such as Korea, Japan, Bangladesh or Burundi have high linguistic homogeneity in common, in contrast to a country like Zaire where most of the languages represent the mother-tongue for less than 1 % of the country's population. As the cases of China and India show, linguistic homogeneity depends less on a limited number of spoken languages but reflects the proportion of the largest linguistic community (94% in China, 25% in India).

7.1.2 TWO EXAMPLES OF CORRELATIONS WITH CULTURAL HOMOGENEITY

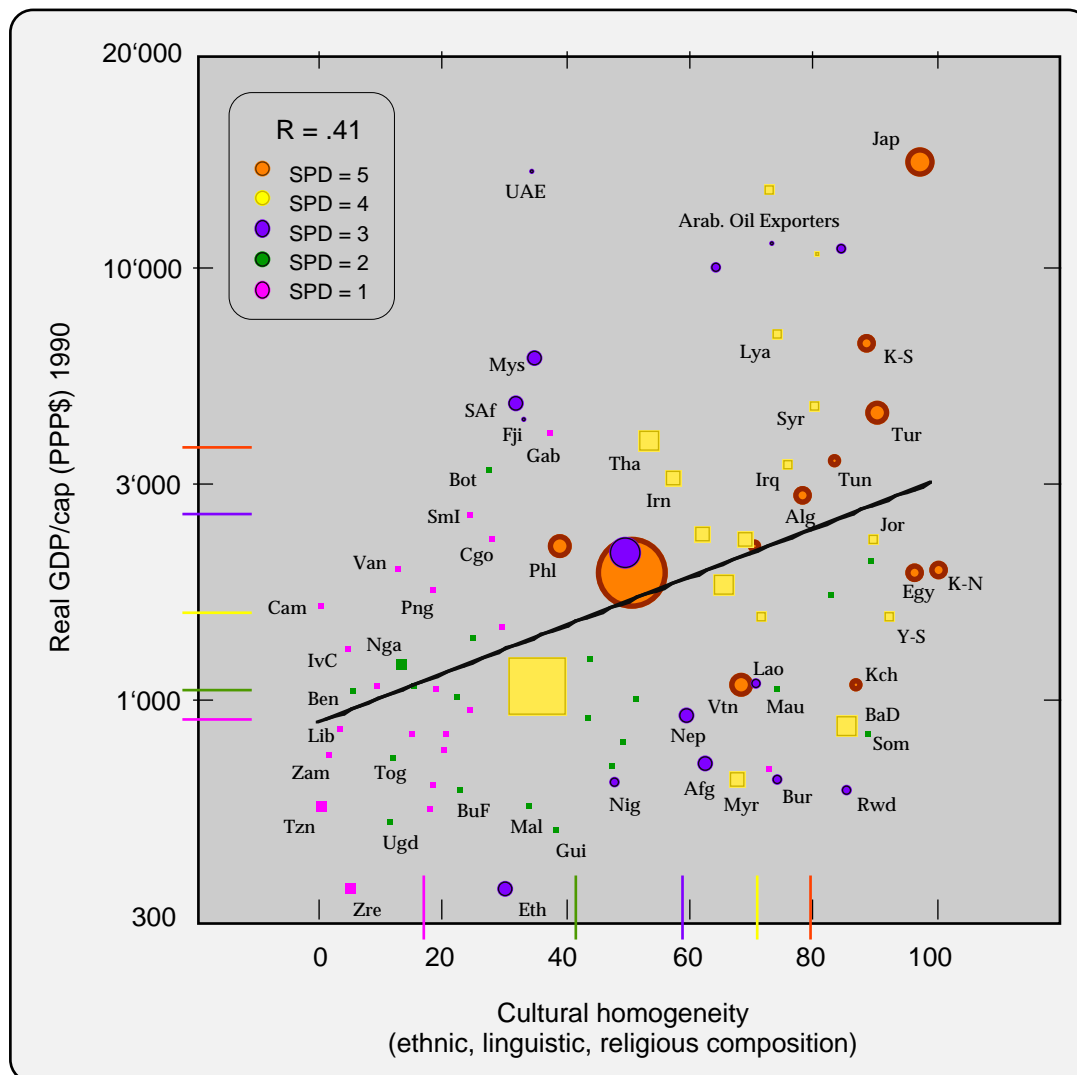
Before presenting the regression models of the cross-national analysis, we show the correlations of cultural homogeneity with socio-political differentiation (Exhibit 7.3) and with the countries' level of economic development (Exhibit 7.4).

Exhibit 7-3: Traditional socio-political differentiation (SPD) and Cultural homogeneity



The correlation between the structural complexity of the cultural heritage and the cultural homogeneity of modern nation states is very strong (Pearson = 0.70). The higher the structural complexity of the ethnic societies in the past, the more homogeneous – in terms of ethnic, linguistic and religious composition – is the country today (Pearson 0.70). The *colours* measures ethnic heterogeneity of a country by an indicator different from ethnic homogeneity in the index of homogeneity: Ethnic heterogeneity is defined as the number of ethnic groups per million inhabitants of a country, whereas ethnic homogeneity (as part of the index) is defined by the proportion of the largest ethnic group in a country. The two measures fall apart when many small ethnic groups complement one or a few dominant groups. In addition, Ethnic Heterogeneity decreases with increasing population size of the country. Countries like Nigeria, South Africa and Ethiopia are ethnically less heterogenous than Ghana, Zimbabwe, Uganda or Botswana which otherwise occupy the same position in SPD and Homogeneity. Western Sahara, Mauretania, Mongolia or Fidji appear as ethnically heterogeneous not because of a large absolute number of ethnic units, but because the number is *relatively* high, i.e. compared to small number of inhabitants.

Exhibit 7-4: Cultural Homogeneity influences Economic and Social Development



The title of Exhibit 7.4 is somewhat incorrect since a correlation is interpreted in causal terms. However, since the degree of cultural homogeneity reflects the level of traditional structural complexity, the correlation in Exhibit 7.4 in fact is a correlation between the cultural heritage

and modern development. Not the GDP/cap-level influences Cultural Homogeneity (at least not in the short run of 30 years), but, if at all, it works the other way round. As the following regressions Analyses indicate, the causal interpretation of the above correlation seems to be valid. In addition, it is remarkable that the countries with the lowest traditional SPD-level and consequently low homogeneity (high heterogeneity) values show practically the same increase of GDP with relative increase in cultural homogeneity as is the case with the subsample of the countries with higher SPD values which are more homogeneous and larger.

7.1.3 CROSS-NATIONAL ANALYSIS: REGRESSION MODELS OF THE IMPACT OF CULTURAL HOMOGENEITY ON DEVELOPMENT

Overview
<p>Homogeneity is an important factor for the economic and social development of the countries in our sample:</p> <ul style="list-style-type: none"> • All three dimensions of homogeneity (ethnic, linguistic, and religious) did have a significant positive influence on the economic level of development in 1960, two of them (ethnic and linguistic homogeneity) did influence economic growth 1960-90 positively. • Homogeneity partly shapes social development (1960 and 1960-95: education, health, and the fertility rate).

We assess the impact of the three main dimensions of societal homogeneity (ethnic, linguistic, and religious) on economic and social development. We tested the impacts of these dimensions with corresponding variables separately, and ethno-linguistic homogeneity combined with socio-political differentiation (*complexity index*, chapter 7.2.3).

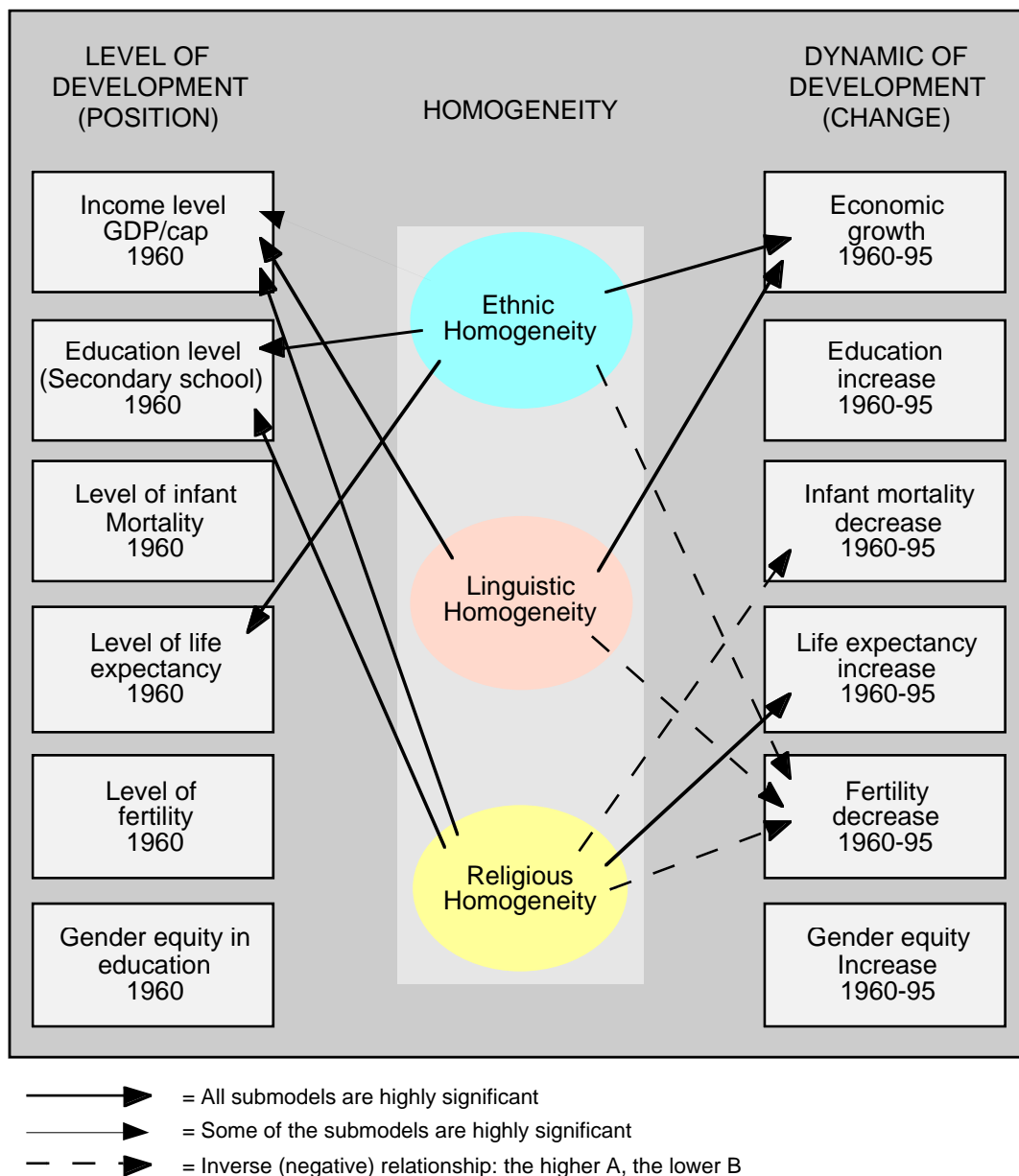
Did homogeneity have an influence on the economic and social development level of the countries of our sample in 1960? Table 7-1 (Annex 8.1) shows the results of the tests. All three dimensions of homogeneity (ethnic, linguistic, and religious) did have a significant positive effect on the economic level of development in 1960, ethnic homogeneity less than the two other dimensions.

That the distinction between these three dimensions is important gets clear from the results for the social dimensions, 1960. The variables for ethnic and religious homogeneity have a (not very strong) significant positive influence on the education level (secondary school), in contrast to the variable for linguistic homogeneity. Only ethnic homogeneity has a highly significant positive effect on life expectancy 1960. In our models, homogeneity does not influence infant mortality, fertility and the male bias in education, 1960.

That religious homogeneity is different from the other two dimensions of homogeneity is confirmed by the tests in the economic growth 1960-95 model (Annex 8.1, table 7-2). Ethnic and linguistic homogeneity have a significant positive effect on economic growth. Human capital loses most of its significance when one of these two variables is introduced into the economic growth model. Religious homogeneity is not significant in our model.

However, regarding social change there are some identical effects of all of the three dimensions. In countries with higher ethnic, linguistic, and religious homogeneity, the fertility rate has decreased faster (Annex 8.1, table 7-3).

Exhibit 7-5: Cultural Homogeneity influences Economic and Social Development



We did not find a robust influence of homogeneity on the development of education (secondary school, 1960-95), in contrast to two of the structural complexity variables (chapter 7.2.3). Homogeneity seems not to be important for explaining the male bias in education, neither for the initial value 1960 nor for the change up to 1995 (like all the structural complexity variables, chapter 7.2.3).

Filmer and Pritchett (1997) found that ethnolinguistic fractionalization increases infant mortality. We cannot confirm that finding for the countries in our sample, 1960-90. Ethnic homogeneity never becomes significant in our models, linguistic homogeneity does not have a robust influence. Only religious homogeneity does have a strong effect on health development, both on the decrease of infant mortality and the increase of life expectancy.

7.2 On structural complexity

7.2.1 INTRODUCTION

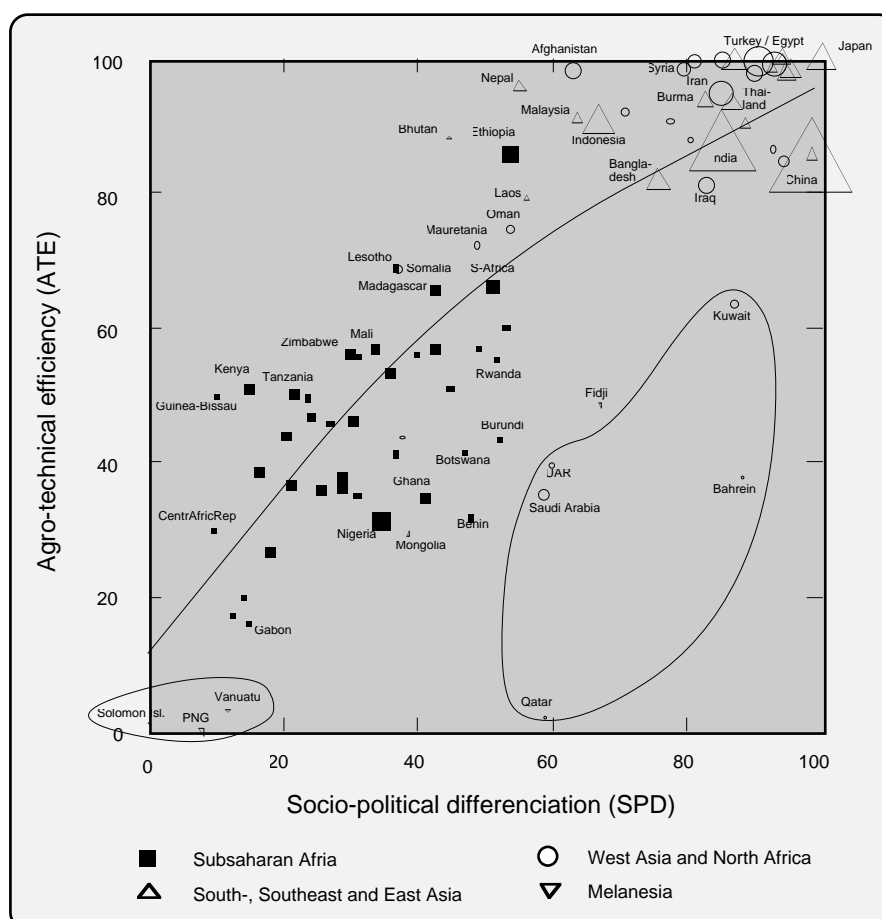
Before presenting the results of the cross-national analysis, we show the correlation between the two subdimensions of structural complexity on the *national* level (exhibit 7-6) and the geographic distribution of the agro-technical efficiency (ATE) in Map 7. For comparison see Exhibit 3.4 and Map .1 and Map 2 with indicators of structural complexity on the *ethnic* level.

As has been demonstrated, structural complexity not only is the most important dimension of any evolutionary description of traditional societies. structural complexity or socio-political differentiation are also the strongest single factor determining economic growth and social development. to additional remarks appear to be necessary. The first is descriptive, dealing with the distribution of complexity before European colonisation. The second is of theoretical nature, presenting our basic assumptions on the impact of structural complexity on the colonial and postcolonial development process.

Structural complexity has been unequally distributed before European colonisation

Exhibit 7-6 presents the correlation of the two sub-dimensions of structural complexity, agro-technical efficiency and socio-political differentiation for national units. The size of the symbols varies with the population size of the countries. The shape of the symbols allows to see to which of the four large world regions the country belongs to: Sub-Saharan Africa; North Africa and West Asia; South-, East or Southeast Asia; Melanesia.

Exhibit 7-6: The correlation between agro-technical efficiency and socio-political differentiation: The case of 87 non-European African, Asian and Melanesian countries

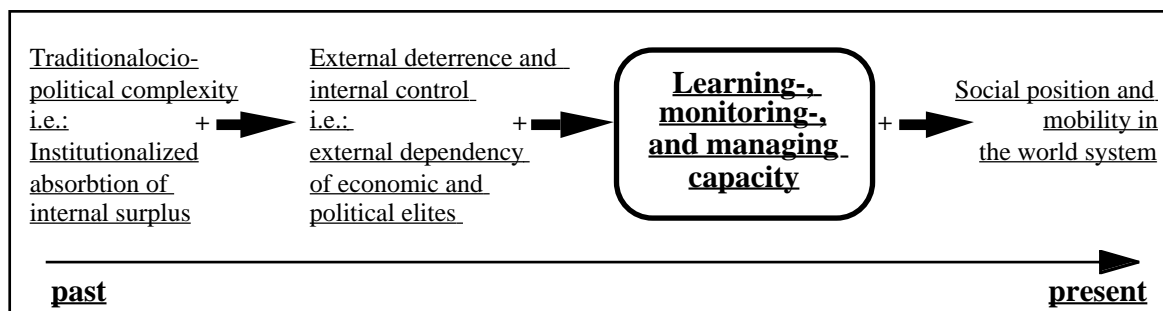


The graph shows the traditional agrarian intensity (vertical) and social differentiation (horizontal) in 87 non-western countries. The stronger the socio-political differentiation of the indigenous, pre-colonial societies, the more intensive is their agricultural production (and vice versa). Three of the four Melanesian countries (small frame; Fiji ranges in the middle due to its large Indian population) exhibit the lowest degree of traditional structural complexity, followed by the African countries south of the Sahara, then the countries of western Asia and North Africa, which again are followed by the remaining Asian countries. Some Arabic countries, as well as Mongolia, stand out because social differentiation is *relatively* much higher than agricultural intensity (big frame). The second and largest group of countries (not of people) are the African states. Ethiopia occupies an exceptionally high position, particularly on the agro-technical dimension. South-Africa, which is the next highest case, reflects again the influence of a strong minority with a background of high structural complexity. The third group tends toward an imbalance between traditions of above average structural complexity and below average values on the agro-technical dimensions. These are Arabic countries reflecting extreme ecological conditions. The last group consists of East-, West- and South-Asian states. They occupy very high positions on the agro-technical dimension and above average positions on the SPD scale.

7.2.2 THE IMPACT OF STRUCTURAL COMPLEXITY ON COLONISATION AND DE-COLONISATION

According to our theoretical approach the effects of expanding capitalism vary with the cultural heritage of nations. The main quality which characterises specific cultures is the structural complexity of their institution. The structural aspect of culture focuses on the power differentials between societies and nations based on different levels of technology. The lines of these arguments are visualised in the following exhibit 7-7.

Exhibit 7-7: Structural complexity and development: A basic model



In the colonial situation, more powerful indigenous societies had social classes interested in, and capable to institutionalized surplus extraction, depending on professional military force. Such centralised and hierarchical systems were often in a better position to deter invading parties and to maintain a certain degree of autonomy (Otterbein 1970). There is no doubt that the differences in the deterring capacity of non-European societies influenced the extent and the quality of the colonial penetration of European powers. The transformation from indigenous to national societies was stronger if based on local social forces and internal legitimisation. The resulting development models permitted to intensify collective learning, added to a more diversified economy, ensuing in a better trained workforce, improved the political consciousness and a faster formation of national capital.

Since economic growth is rooted in a number of non-economic local factors, success in development is not a one-dimensional phenomenon. In the most recent phase of capitalist

penetration, culture advances to an increasingly relevant criterion for the investment decisions of international as well as national actors. It is expected that the bargaining capacity of societies and nations – in the past not less than in the present – depends on the structural qualities of their respective culture. These qualities combine technical, organisational, and symbolic-normative elements of the cultural configuration.

7.2.2 COMPLEXITY: RESULTS FROM CROSS-NATIONAL ANALYSIS

<i>The impact of structural complexity on development: Overview</i>
<p>Structural Complexity is a highly important factor for the economic and social development of the countries in our sample:</p> <ul style="list-style-type: none"> • The higher the level of socio-political differentiation and the lower the proportion of local religions, the higher the GDP per capita in 1960. • Economic growth 1960-90 is positively influenced by the <i>complexity index</i> (socio-political differentiation and ethno-linguistic homogeneity). • Complexity has a strong influence on social development, particularly on life expectancy, the development of infant mortality and the fertility rate.

Complexity is a highly important factor in explaining the economic and social development of the countries in our sample. Each of our economic and social variables has been significantly influenced by one or several of the complexity variables, except the male bias in education.

The economic level of development in 1960 is influenced by the degree of socio-political differentiation and the proportion of local religions (Annex 8, tab. 7-1): The higher the level of socio-political differentiation and the lower the proportion of local religions, the higher the GDP per capita in 1960. The importance of complexity for economic growth is less pronounced, though. The proportion of local religions does not matter at all, and the level of socio-political differentiation has only a weak positive effect on economic growth which loses its significance when controlled for geographical position and oil resources (Annex 8, tab. 7-2).

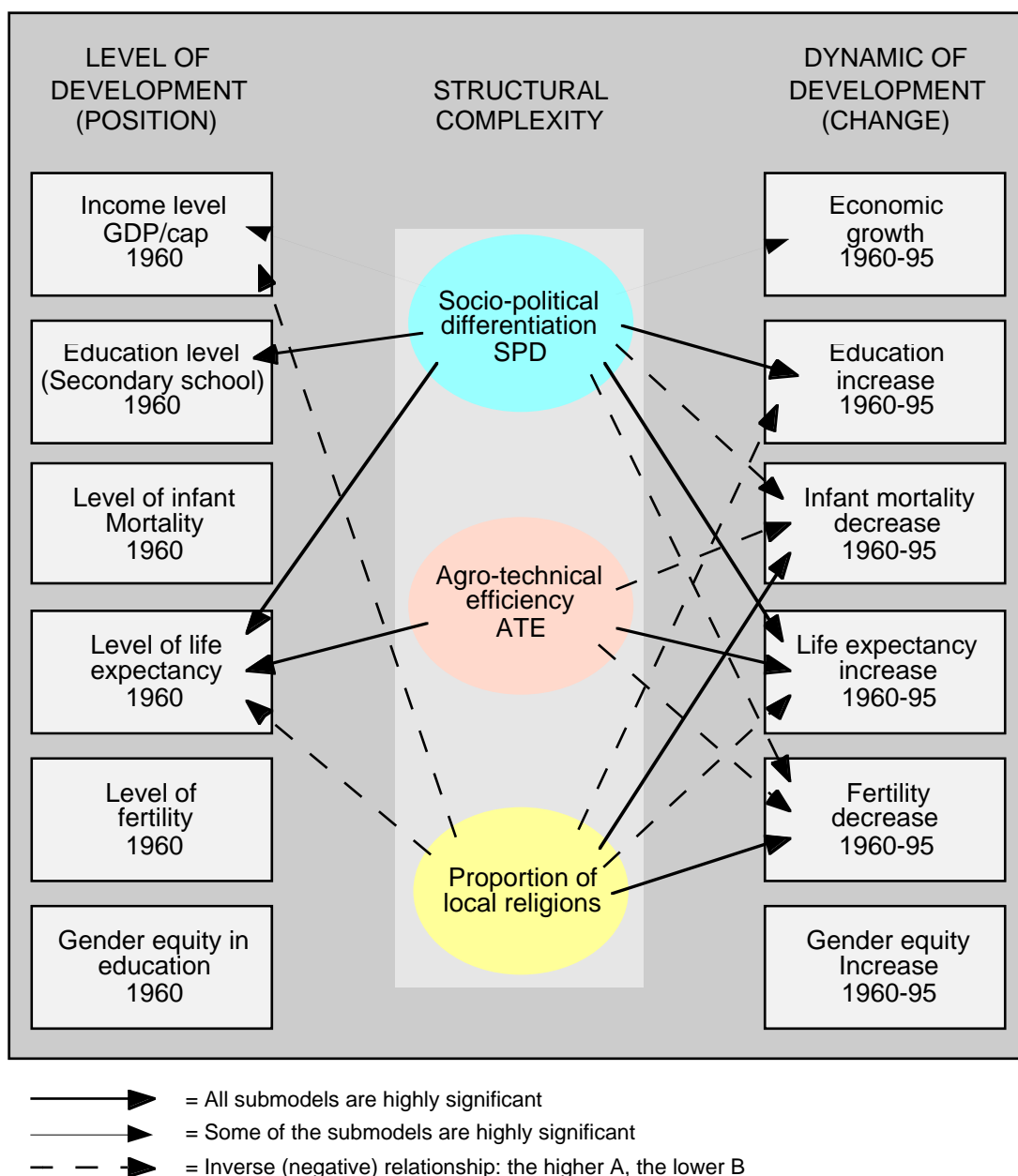
We combined socio-political differentiation and ethno-linguistic homogeneity to create an *index of complexity*. This index is a significant predictor for the economic development level of the countries in our sample in 1960 (tab. 7-3) as well as for economic growth 1960-90 (Annex 8, tab. 7-4).

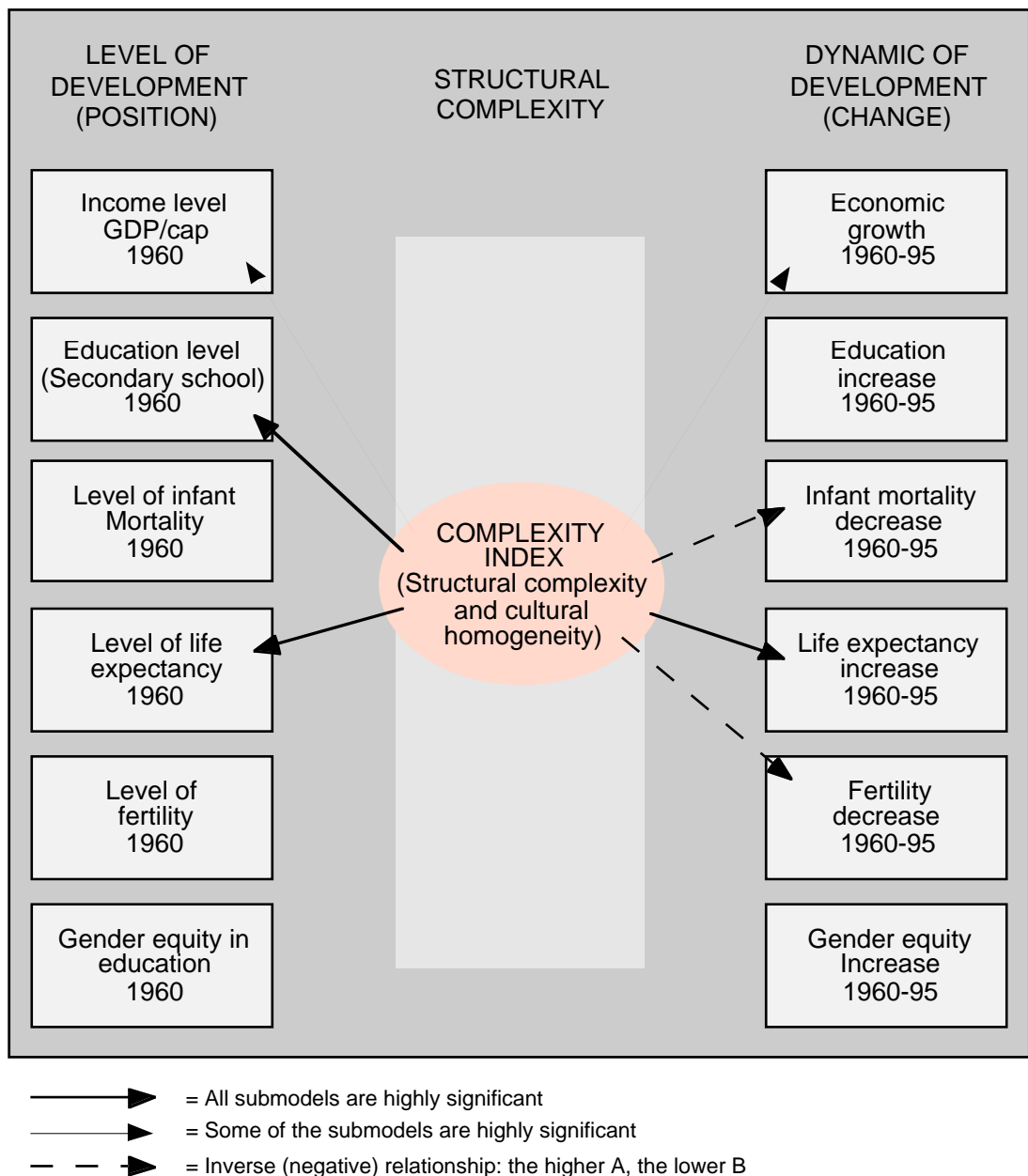
The level of agro-technical efficiency does not seem to influence economic development level or growth at all. Complexity, particularly the level of socio-political differentiation, also influences education (secondary school 1960 and 1960-80, Annex 8, tab. 7-1 and tab. 7-5).

Each of the three complexity variables (socio-political differentiation, agro-technical efficiency and the proportion of local religions) influences life expectancy in 1960 (Annex 8, tab. 7-1): The higher the degree of socio-political differentiation and agro-technical efficiency, the lower the proportion of local religions, the higher life expectancy in 1960. Complexity remains very important for the change of life expectancy, for the period 1960-90 and 1970-95. The degree of socio-political differentiation seems to be the main predictor for the development of life expectancy, with standardized regression coefficients (beta-coefficients) between 0,58 and 0,70 (Annex 8, tab. 7-6). The other two complexity variables remain significant as well (Annex 8, tab. 7-7). Each of the three variables also has a significant influence on the development of infant mortality, 1960-90: The higher complexity, the better the development of

infant mortality (Annex 8, tab. 7-8). There is also a highly significant influence of complexity on the change of the fertility rate, 1970-95, beta-coefficients for socio-political differentiation and the proportion of local religions are between 0,50 and 0,66 (Annex 8, tab. 7-9).

Exhibits 7-8: Structural complexity influences economic and social development.





The only variable for which we did not find any influence of complexity (and homogeneity) is the male bias in education. There must be other factors that explain gender differences.

8 Cultural Style matters

Variables not, or weakly related with structural complexity will be presented in two groups. First, the most relevant dimensions of kinship systems are presented: lineality, patri-dominance, familism). Then we will analyze two aspects of the subsistency technology: Gender division of labour and the importance of nomadic animal husbandry.

8.1 Kinship Systems: The impact of Patridominance, Lineality and Familism

The impact of the kinship system: Overview

In our economic models we did not find any significant impact of traditional kinship systems on economic growth. Social development, however, seems to be partly shaped by kinship traditions, particularly health and gender dimensions. Some kinship traditions influence social development 1960-95 less (linearity of rules, patridominant rules), some (familism) even more than they influence the initial level 1960.

- The higher the 'linearity of rules' variable in a country, the higher infant mortality, the lower life expectancy, and the higher the fertility rate in 1960.
- The higher the 'linearity of rules' variable in a country, the worse the development of life expectancy 1970-95.
- Patridominant rules seem to have no influence on economic and social development.

Among the three kinship system variables, familism has the largest impact on social development, 1960-95:

- Familism influences health: The higher the familism-value, the better the development of infant mortality and life expectancy.
- The higher the familism-value, the higher the fertility rate in 1970. But in the development of the fertility rate 1970-95, familism is an important factor to explain its decrease.

Familism has a positive impact on the development of education, but it increases the gender difference in education.

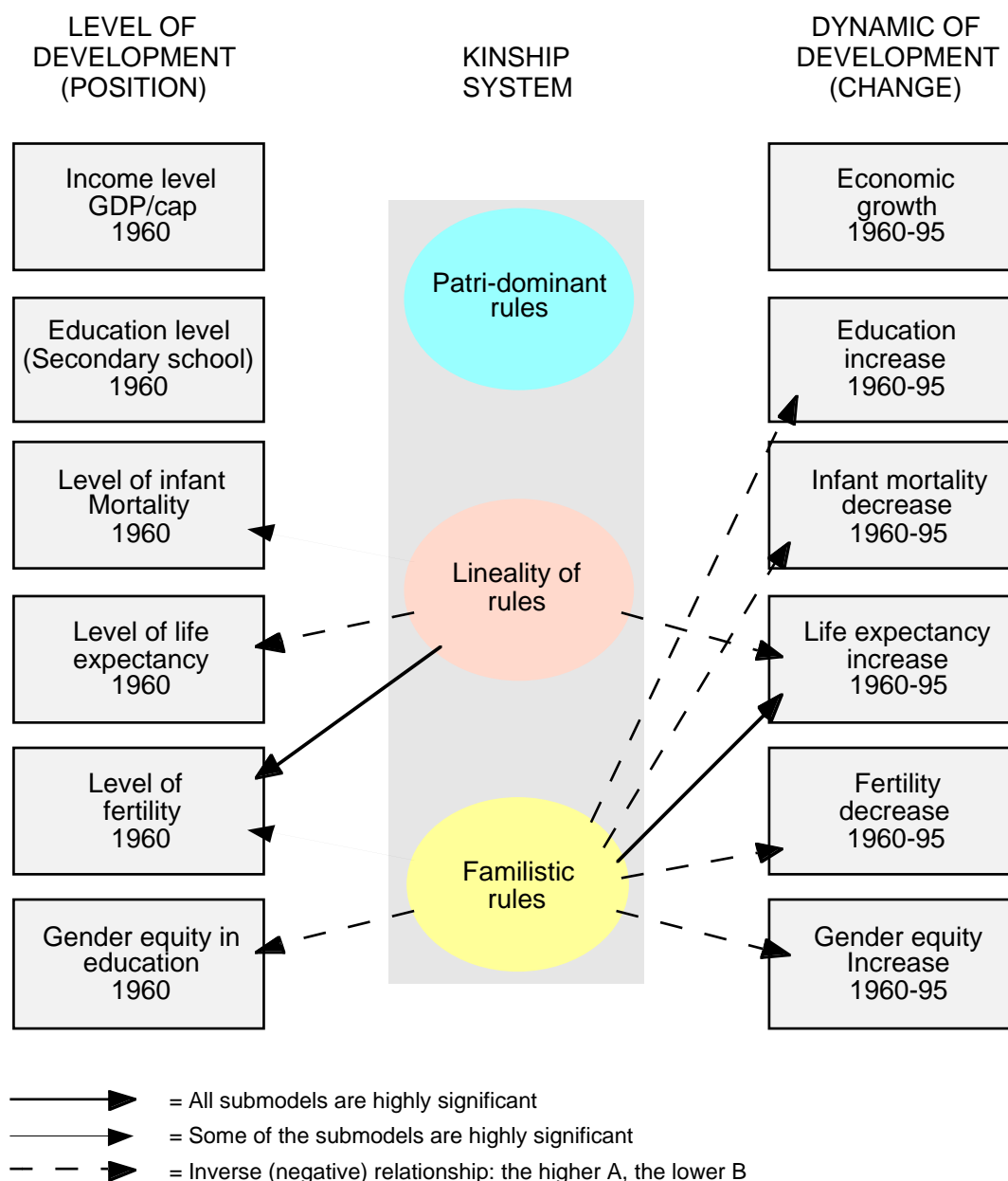
LINEARITY OF RULES

Like all other kinship variables the 'linearity of rules' variable is not significant in our model 'level of economic development 1960' (Annex 8, tab. 8-1, col. 1). But it does have a significant effect on some social dimensions 1960, namely infant mortality, life expectancy, and the fertility rate (Annex 8, tab. 8-1). It seems to loose some of its impact for the further development, except for life expectancy. It influences the development of life expectancy 1970-95 significantly (Annex 8, tab. 8-2).

PATRIDOMINANT RULES

The variable for Patridominant Rules is an index measuring the rules applied in the transver of status and wealth, like the Linearity of Rules variable is an indicator for the construction of membership from father to son (patrilineal descent) or from mother to daughter (matrilineal descent). In our models we have never found a significant impact of this variable on economic and social development.

Exhibits 8-1: Kinship systems influence economic and social development.



FAMILISM

The index has not been discussed in Part II because the concept has not experienced an extensive scientific discussion which could be reported here. In our opinion, however, familism deserves more attention than it has got so far. The term refers to sociological conditions under which the individuals are tightly subordinated to families, and indeed have little identity outside their families. The positive potential of familism lies in its integration capacity on the local level. This view has been discussed in this report in the chapters on kinship and corporate lineage organization. We also mentioned the ambivalence of such capacity because the corporate groups of large extended families can effectively oppose the institutional capacities of the state who is operating on a higher than family or kinship level.

we now add more to the ambivalence of the term. Familism, particularly when local societies get marginalized, can disintegrate toward a suspicious and distrustful isolation, or "amoral familism", as Banfield (1967) called it. On the other hand, reducing dependence from controlling clans members and developing *individual relationships* (instead of conformism within small families) must be considered a good development. It happens when socio-political differentiation progresses gradually and along the specific cultural agenda of the people involved.

Our familism index should measure the relative position of traditional societies on such a dimension. The index comes close to the Patri- and Lineage organization, but includes monogamy. the correlation between the three composants are gibenin Exhibit 8-2

Exhibit 8-2 Three indicators of familism

	1	2	3
1 Marriage exchanges (neg.)	• –		
2 Polygyny	-0.52	–	
3 Lineality of descent	0.22	-0.38	–

Three out of four variables form a consistent system. The negative and positive signs have no meaning here because the direction of the sign confirms our leading assumption: The higher the exchange of wealth and labour for marriage, the more a society tends towards polygyny, and vice versa. And the stronger the lineage principle in a society, the more frequent is polygyny. And we should not forget the not significant result: Whether a society is patrilineal or matrilineal has no bearing on the structural complexity. Once more, Patri- or Matriorientation reveals its loose connection to structural variables.

The three variables "Marriage exchanges", "Polygyny" and "Lineality" together form the familism index. It may be assumed that high familism in the past still plays a role today, resulting in higher fertility levels. In fact, the social status and power of lineage organization depends from their numbers. But the number can be increased only through pro-natalist politics, i.e., by high fertility and control over women. As Exhibit 8-3 shows, these assumptions are not only relevant for anthropological discussions of "primitive" societies", but for development policy too.

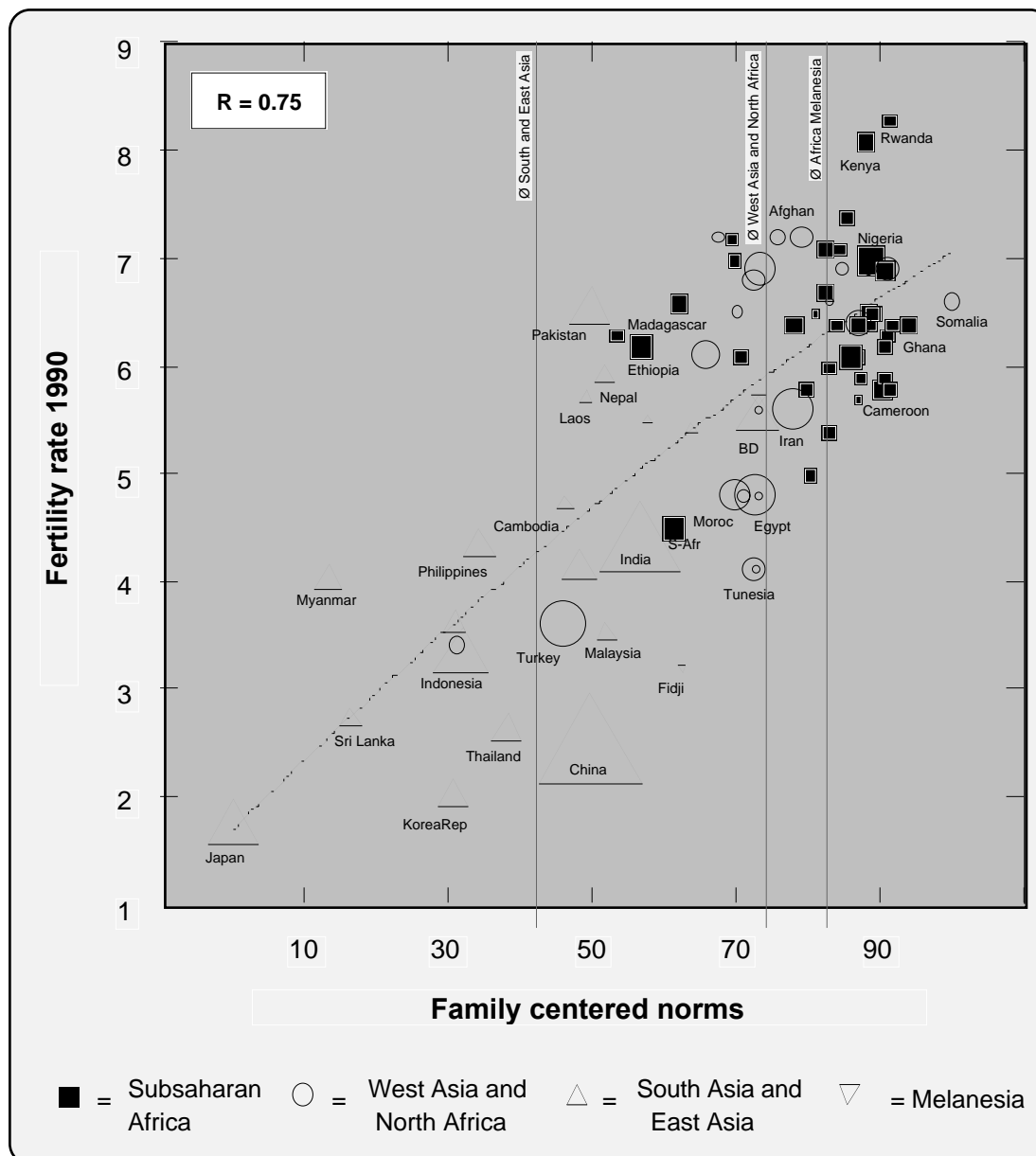
Like the other kinship system variables, the variable familism had no significant influence on the economic development level and economic growth of the countries in our sample. But, compared to the two other kinship system variables, it has the largest impact on social development, 1960-95.

Familism, for instance, influences the development of education positively: The higher the degree of familism, the faster education increases (secondary school, 1960-85, Annex 8, tab. 8-3).

Familism is partly shaping the development of health in the countries of our sample:

- The higher the degree of familism, the better the change of infant mortality (1960-90, Annex 8, tab. 8-6).
- The higher the degree of familism, the more pronounced the increase of life expectancy (1970-95, Annex 8, tab. 8-7).

Exhibit 8-3: Familism spurs demographic growth



Somewhat paradoxical is the effect of familism on the fertility rate (Annex 8, tab.8-5). Regarding the initial level in 1970, it has a very strong positive effect (the higher the degree of familism, the higher fertility). Regarding the change of the fertility rate from 1970 to 1995, it is an important factor to explain its decrease.

Familism seems to be one of the main reasons for a male bias in the education system. It influences the gender difference (primary school) in 1960 as well as the the development of the gender difference 1960-86 (secondary school): The higher the degree of familism, the higher the gender difference in education (Annex 8, tab. 8-4).

Boone (1996) shows that gender oppression (as well as political and ethnic oppression) decline as one goes from poorer to richer countries. We can confirm for the countries in our sample that gender difference in education decreases with economic growth, 1960-85. In some estimations familism has almost as much (negative) influence on the development of gender equality in education as economic growth has positive influence. Some cultural traditions seem to be important obstacles to progress in this area.

8.2 Subsistence economy: Nomadic animal husbandry and division of labour

The impact of the subsistence economy: Overview

The type of traditional subsistence economy influences Social Development.

The degree of division of labour between the gender influences social development in the countries of our sample.

Nomadic animal husbandry as a subsistence technology has a significant influence on the *level* of social development in 1960 (Exhibit 8-4; Annex 8, tab. 8-8). The higher the Nomadic Animal Husbandry-value, the higher the fertility rate and infant mortality; the lower life expectancy; the higher gender differences in education (secondary school, 1960). However, the influence of the subsistence type seems to vanish. No significant and robust effect on the change of the economic or social variables could be found for 1960-95.

The degree of division of labour between the gender influences social development. A higher polarity not only increases gender differences in education (1960 and 1960-85, Annex 8, tab. 8-9), but has an impact on other social dimensions as well. The higher the polarity, the faster the decrease of infant mortality (Annex 8, tab. 8-11) and the fertility rate (Annex 8, tab. 8-13), and the stronger the increase of life expectancy (Annex 8, tab. 8-12).

PART IV: CONCLUSION

1. Reviewing the theoretical concept

Comparative scholars analysing development in African and Asian countries agree on one thing: capital investments and political governance are decisive factors for economic growth and improvement of social well-being of a country. Less emphasis, however, lies with the factor of culture. While hundreds of comparative studies have analysed impacts of economic and political factors on modern development, the cultural factor rests mainly in the dark, and this for different reasons. For one, analysis of "culture" has been mainly the pre-occupation of anthropologists who emphasise on qualitative in-depth studies of particular societies. Two, comparative research lacks cross-cultural data. Three, there is a lack of theories and concepts allowing to analyse culture on systematically comparative and empirical grounds.

This study is a contribution to fill this gap. Empirically, it is based on one of the richest data banks that one of authors has collected and transformed into cultural indicators for the last 10 years and that have been recently published in the "Atlas of pre-colonial societies" (Müller et al. 1999). Theoretically, we have developed a conceptual scheme that should be able, in the notions of *core culture* and *cultural style*, to distinguish between cultural elements that are crucial for societal evolution and development and those that do not. Also with regard to development, for which we analyse the period of 1960-1995, we chose two dimensions: the one is *economic*, the other is *social*. Based on the findings of chapter 3 and 4, which give empirical evidence that a few core culture elements can convincingly explain the successful survival and evolution of traditional societies, we started two main hypotheses with regard to the role of cultural heritage for the development of modern nation states:

Theoretically, we expected elements of core culture to have a significant influence on economic but not on social development

Theoretically, we expected elements of cultural style to be of no influence on economic development but of influence on social development. This basic theoretical scheme can be presented as follows (Exhibit 9-1):

Exhibit 9-1 The basic assumptions of the theoretical approach

	Economic development	Social development
Core culture	+	0
Cultural style	0	+

We explain these basic hypotheses as follows:

Economic development has much to do with what we defined as societal evolution in the past: it implies *increasing productivity, and competitiveness* with regard to other societies, and it means *accumulating power potentials of a society*. Like societal evolution, economic development in terms of GNP-growth is more or less one-dimensional in the sense that it does not measure distribution of economic wealth, or the contribution of economic wealth to the well-being of the population. And, like social evolution, it is descriptive in the sense that the notion of GNP-growth is not normative with regard to specific cultural values. With all these parallels in mind we part from the most simple presumption: The complexity of the traditional core culture has a positive impact on economic growth because structural complexity,

accumulated in the past, is a favourable condition to modern economic growth. Social development, in contrast, is partly defined as equal access to vital goods: More education or longer life expectancy show the extent to which a great majority of the population has better access to schools or health services. Therefore, inspite of *correlations* between productivity and social development, we see no theoretical reason why the productive core elements of the cultural heritage should have a direct influence on social development.

Social development, in modern terms, is recognised as an important dimension of development, describing fundamental societal functions such as social integration, collective systems and networks of distribution of vital goods, or normative orientation for individual and collective identity. Social development is independent from the economic dimensions insofar as many of its modern components-- as for instance strategies for more equal provision of education or health-- not necessarily, and only under certain conditions, contribute to economic growth or productivity. This reminds us on what we identified in traditional societies as the main functions of cultural style in chapter 4. We therefore presume on the one hand that the two non-evolutional elements, cultural style and social development, are mutually dependent, and that cultural style, as in the past, does not influence the improvement of productivity and power potentials.

Both hypotheses make one common assumption: that there is no categorical break between traditional and modern society. As much as modern industry, mass production and -communication or technology may be considered as "revolutionary", they do not erode or even extinct cultural heritage as long as people's basic needs still depend on the functioning of traditional institutions-- of core culture and cultural style as well. This means also that these institutions must not be perceived as a cultural heritage alone but that they develop further, partly hand in hand, and partly independent from modern forms of economic and social development.

At this point, we have to come back on the methodological distinction in the analysis of culture, comparing separately its influence on *stock and flow*. In the first perspective, we compare Asian and African nations in their situation of 1960, that is, with their cultural heritage, and with their different socio-economic *level* reached in the past. This is, so to say, the socio-economic stock of all countries and a common departure for development that we let begin with the year 1960. The second perspective is the dynamic evolution, which is measured in terms of *difference of socio-economic growth rates* in the time span from 1960 to 1995. In this perspective, we analyse the impact of cultural heritage on socio-economic development, which is defined as flow, or differentials of economic, social and cultural levels of nation states in time.

We mention that defining the period of 1960-1995 as the "development period" is done for pure practical reasons of availability of cross-national indicators. It does neither mean that the year of 1960 was a particular point of time between "traditional evolution" and "modern development" , nor that we would expect different results from having chosen another starting point. But, certainly, because of the recent event of modern nation building in Africa an parts of Asia, it is one of the earliest possible dates allowing for cross-national analysis.

2. Empirical findings

Looking at thesis of our empirical tests (Exhibit 9-2), our basic assumptions are confirmed to a large degree, and, more important, the theoretical concept proves to be most useful:

Core culture matters in economic development, cultural style does not

The distinction between *evolutional and non-evolutional* elements, developed for the description of cultural heritage of the past, proves to be a powerful instrument for the

assessment of the cultural factor in modern economic development. Indeed, we can not only demonstrate *that* culture matters but *which cultural elements do so or not*. The distinction between core culture and cultural style is a perfect fit: all elements of core culture stimulate economic growth, and none of the style elements does so. This is a clear-cut result which characterises as well the accumulation of societal resources in the past before 1960 as the period of development since then.

Among the single elements supporting economic growth, we find, as expected for theoretical reasons, that socio-political differentiation still counts (Exhibit 9-2). We say still, because we cannot exclude that its effects under certain circumstances are fading: it had a positive impact on the level of economic development of African and Asian nation-states in 1960, but not all of our indicators for structural complexity proved to be robust in all of our empirical models for economic growth.

Exhibit 9-2: Summary table

SOCIO-ECONOMIC DEVELOPMENT CULTURAL HERITAGE	Economic dimension		Social dimension					
	Level 1960	Growth 1960-95	Level 1960			Development 1960-1995		
			Educ.	Health	Gender	Educ.	Health	Gender
STRUCTURAL COMPLEXITY								
- Soc differentiation (SPD)	**	*	*	*		*	**	*
-AGRO-TECHNICAL EFFICIENCY				*			**	*
- COMPLEXITY INDEX (SPD + HOM)	**	**	*	*			**	*
- PROPORTION LOCAL RELIGIONS	**			*		*	**	*
KINSHIP SYSTEM, SUBSISTENCE AND GENDER								
- LINEARITY OF RULES				**	*		*	
- PATRIDOMINANT RULES								
- FAMILISM					**	*	**	**
- NOMADIC ANIMAL HUSBANDRY				**	**			
- GENDER DIVISION OF LABOUR					*	*	**	**
HOMOGENEITY (HOM)								
- ETHNIC HOMOGENEITY	*	**	*	*				*
- LINGUISTIC HOMOGENEITY	**	**						*
- RELIGIOUS HOMOGENEITY	**		*				**	*

But, as can be seen from the synopsis, also homogeneity matters. This underlines the fact that modern nation-building was a crucial event. In general, it meant that a number of traditional societies were politically united in the confines of one single and larger geographical territory. Depending on the political situation, this process implied different fates

for traditional societies: they became majorities or minorities within the new nation state, and they remained together in the same nation or were divided up through the boundaries of two or more nation states. With a few exceptions however, it means that modern nation states are more heterogeneous than traditional societies. Homogeneity of modern nation states varies to a great extent. It depends not only of the ethnic, religious or linguistic diversity of a world region in the past but also from political decisions. In defining territories of modern national states, political powers either respected "natural" boundaries of ethnicity, language or religion, ignored them or even divided territories of homogeneous societies in the sense of "divide et impera". Our analysis gives empirical evidence how much this historical event in a dramatic way influenced chances for economic development: The more societies in the new nation state were able to unite under a common language or ethnicity, and the more the political powers, in defining the territorial boundaries, paid respect to the existing geographical boundaries of language and ethnicity, the more a nation state was apt to follow the path of economic growth. Socio-political differentiation and ethno-linguistic homogeneity together form a powerful single cultural factor: the higher they are, the better are the chances of a nation-state for economic development.

An interesting case is religion, a core element measured in two variables, proportion of local religions for low complexity, and proportion of literal religions (Buddhism, Christianity and Islam) for homogeneity. The fact that a greater proportion of all literal religions likewise contributed to the economic level of 1960 is a strong argument that it is not the specific content of the religious message that counts for economic development. Rather, it is the general effect of literal religions to give normative and cognitive orientation and to allow for social integration on a societal level beyond family and kinship. Yet this function of religion is lost in modern economic development: with respect to economic growth, neither religious homogeneity of a nation-state nor the strong presence of one of the literal religions of Buddhism, Christianity and Islam make a difference. We interpret this in the way that the normative functions of religion have become more optional and individualised for higher developed countries (and as such shifted to cultural style) while cognitive functions are substituted by education. This does not mean that religion has become non-significant in modernity: as we shall see, it has become an even more important core element for social development.

Our distinction between core culture and cultural style for the past is particularly relevant for the exclusion of factors that do not correlate with economy: any of the elements of cultural style, be it the kinship system or subsistence elements, be it gender definition of roles or division of labour, was neither decisive for the economic level of a country in 1960, nor did any of these elements influence chances of national economic growth since then.

Social development is dependent on two factors: cultural style and core culture

Social development is more complex than economic development. Therefore, we have measured separately for education, health and gender polarisation in division of labour. They are dependent upon culture in quite different ways that do not allow for simple generalisations.

One general trait, however, is obvious: Social development is influenced by practically all elements of the cultural heritage. This is, half-ways, against our theoretical proposition: cultural style, as expected, does influence social development. But core culture also does. What does that mean?

Besides the arguments already mentioned, our theoretical assumption on core culture drew from those modernisation theories that look on social development as a derivative of economic growth which can be expressed in simple formulas as: "the richer a country, the

healthier its people". On the basis of this idea, we presumed that the social influence of those cultural elements which contribute to economic growth will be "consumed" and therefore disappear in our statistical models. Our empirical tests show that this is not the case. Thus, we have to think in more complex relationships: Some institutions of the cultural core have a direct influence on economic and social development as well. Core culture, to a certain extent, influences social development independently from what happens with economic growth. We cannot give well founded, deeper explanations on the combined effects of economy and culture on social development because, according to the objectives of this study, our models aimed at demonstrating the effects of culture. Analysing the predictors of social development as such would require different models. Even though, we can say that social development is influenced, regardless of presumed "trickle down" effects of economy, directly and substantially by most cultural institutions and traditions.

Box 9.1: Infant mortality – influenced by economic growth and cultural traditions

Like many others, e.g. Pritchett and Summers 1996 ("wealthier is healthier"), we find that higher income lowers infant mortality. But some of the cultural heritage variables are as significant as economic growth for the decrease of infant mortality (familism, cf. tab. 8.1; religious homogeneity. cf. tab. 7.1.2), some even more important (socio-political differentiation, cf. tab. 3.3.3, gender division of labour, tab. 8.3).

Gender disparities in education are influenced by economic growth and cultural traditions.

Empirical research has shown that gender disparities in education in general do not respond to changes in income p.c. (World Bank 1998: 87). Filmer/King/Pritchett (1998) have argued that gender disparity is not something that economies "grow out of". The Human Development Report (1999, 132) concludes "that greater gender equality in human development does not depend on income level or stage of development. [The results] show that it can be achieved across a range of cultures."

The results of our models are different: We find that economic growth does have a limiting impact on the male bias in education (cf. tab. 8.1). On the other side, the dimensions of cultural heritage that influence economic growth (structural complexity, societal homogeneity) do not explain gender differences in education. But certain traditions (familism, nomadic animal husbandry, gender division of labour) are highly significant predictors for gender disparities in education.

Some elements of traditional society matter for development, - but we do not know much about why and how

Let us turn now to the institutions of cultural style which, as expected for theoretical reasons, are of influence for social development. We remember: cultural style comprises those elements of culture, found on all levels of societal evolution, that are presumed not to contribute to evolution in the past. In common wisdom, some forms of these elements-- like extended familism, patriarchal mode of intergenerational mode of transfer of status and wealth or a highly gendered division of labour-- are associated with traditional traits of societies opposed to processes of modernisation. Our findings on social development indicate that this idea is wrong. Firstly, we have empirical evidence that some institutions -- like a patriarchal law system --do not have any influence on social development. Secondly, while some traditional cultural elements, in terms of Western values, do have some single "negative" effects, our findings indicate that this same institution contributes positively to many items of modern social development. The example of familism shows stunning results: Extended kin relations rooted in the past increase gender difference in education but have a positive impact on the development of education as a whole, on the reduction of infant mortality, and on increase of life expectancy. On one hand, extended kin relations measured in familism lead to a higher fertility rate in 1970. On the other, it is an important factor to explain the decrease of the fertility rate from 1970 to 1995. A similar example is gendered division of labour. The more

labour in a national society is divided up between men and women, the more we find gender differences in education, that is that girls have less chances to go to school. Yet, polarity of men's and women's work led to a faster decrease of infant mortality and the fertility rate, and positively influenced life expectancy. Some of these puzzling results are in line, others in sharp contrast to findings in the specialised literature (see Box.9.1), but certainly need further research.

3. Implications for development

In the last part, we have analysed the influence of culture on modern socio-economic development. Studying which institutions of culture weigh in which elements of economic and social development, we found out that culture, indeed, weighs high and matters in many, sometimes unexpected ways. Our study, concentrating on the functions of culture, is not able to give answers on the wider questions of the combined influence of all factors, endogenous and exogenous, influence socio-economic development. Giving answers to that requires further research. Nevertheless, we can draw some conclusions with regard to the function of culture in modern development.

The role of the cultural past must be reassessed. The cultural heritage plays a more important role than many development philosophies prefer to perceive, and are linked with socio-economic development in a different way than many political ideas or scholar traditions like to think of.

While a significant and strong influence of culture on economic development can be attributed to a few key variables, the relationship between culture and social development is complex. As we have seen, many institutions of core culture and cultural style correlate differently with the single elements of social development. Using the cultural heritage as a resource for social development requires particularly careful evaluation. Our findings indicate that traditional styles of culture can contribute positively to modern forms of social development.

In terms of potentials for socio-economic development, our analysis shows that the cultural heritage implies unequal chances for the countries we analysed. This is, from a normative point of view, unsatisfactory. *Cultural heritage, however, is not destiny.* Statistical models of economic growth as well as our model on the influence of the cultural heritage do explain just part of the variance, which means that other factors count, too. Moreover, we find that vital functions of society-- production, distribution, collective security, social integration and reproduction-- can depend on several elements of cultural style that can partly be substituted. This means that promising combinations between traditional cultural styles and modern social development can be sought in many different ways that are not explored yet.

4. Summary

This report is both descriptive and analytical. For over 900 ethnic societies and 87 countries of Africa, Asia and Melanesia, the process of cultural development is described in a long-term evolutionary perspective. By methods of cross-cultural and cross-national analysis, the picture of a macro-history of growing social complexity appears, linking the past with the present. In its analytical parts, the report deals with the crucial relationship between tradition and modernisation: We give answers to the questions whether or not, and to which parts, the cultural heritage of the non-European nation-states does influence their socio-economic development.

In Part II of this report ("Culture in Traditional Societies") we introduce common definitions of culture and develop our own theoretical concept. In this concept, two basic elements are distinguished: *Core culture* includes those institutions that were triggers of the social

evolution in the past and helped traditional societies to survive in competition with others. This concept of evolution is descriptive and functional but not normative: It describes growing productivity and power potentials of the actors involved, but excludes judgements on their social, political or moral implications. *Cultural style* is conceived as a set of institutions that can be found on all stages of social evolution and therefore are considered as non-evolutionary elements.

Part II continues with the premise that structural complexity is an essential part of macro-historic evolution. We discuss how this dimension of the cultural heritage can be measured and compared by valid cross-cultural indicators. Based on a data bank recently published (Mueller 1999) containing the largest collection of social indicators of ethnic societies available, a profile of social evolution of hundreds of traditional societies in Africa, Asia and Melanesia is given. We show that the process of social evolution of thousands of years can be described in a few key elements of culture which have one single underlying idea: it is the growing institutional complexity that stimulates societal productivity and power potentials. To that, another, complementary perspective of culture is added: the non-evolutionary institutions of the cultural style, such as kinship relations, or gender division of labour. We show that they fulfil essential functions of distribution, social integration or normative orientation, not only under the so called traditional conditions, but also as a part of the survival strategies of marginal groups in the modern informal sector.

Part III ("Culture matters in development") analyses the weight of the past in modern socio-economic development. To this end, the level of observation is changed. The same cultural traits discussed in Part II are no longer observed within the framework of traditional societies, but as elements of the cultural heritage within the boundaries of the 87 nation states of our sample. This means that the cross-cultural indicators had to be transformed into cross-national indicators, and that a new dimension of national culture becomes pertinent: linguistic, ethnic and religious homo- or heterogeneity.

By methods of cross-national analysis, we estimate the influence of culture on development. On the part of the independent variables, we distinguish again between the core culture and the cultural style, analyse their respective influence on the socio-economic level of the countries in 1960 as well as on economic growth and social development (education, health and gender) since then. Our most important results present as follows:

- The economic development is directly influenced by the traditional core culture;
- social development is directly influenced by both, the traditional core culture and the cultural style;
- in structural terms, modern development does not signify a categorical break with the past but an acceleration of socio-political differentiation;
- the traditional styles of a society are not generally an obstacle to modern social development; on the contrary, some style elements are favourable to modern objectives.

In Part I we conclude that the cultural heritage must be reviewed. In economic and social development, the past constitutions of local societies play a much more important role than many development philosophies prefer to perceive. In fact, the core culture and the cultural style are interlinked with socio-economic development in a different way than many political ideas or scholarly traditions like to think of.

In terms of potentials for socio-economic development, our analysis shows that the cultural heritage implies unequal chances for the countries we analysed. Tradition need not to impede development. In literature it is often conceded that *some* traditions may promote development by ensuring a smooth transition from old practices to new ones. In this report, we go a step

further by saying *which* elements of the past influence *what* aspects of development favourably or not.

However, the cultural heritage is not destiny. We find that vital functions of society – production, distribution, collective security, social integration and reproduction – may depend on a wide range of elements of cultural style that allow for modern styles of social development. This means that promising combinations between traditional cultural styles and modern social development must be sought in many different ways, according to the socio-economic level of a society. In spite of these new insights, the research agenda has not become shorter.