

## MODELLING THE SOCIAL EVOLUTION: THE STATE OF ART

In 1959 Robert Braidwood, in occasion of the Centennial of Darwin's masterpiece, *On the Origin of Species*, gave a paper in which, for the first time, the trends of social prehistoric evolution in different regions of the world were graphically represented as a model (Fig. 1).

Based on Steward's theory of "cultural ecology", the model focussed on levels of integration seen as always more intensive adaptations of settlement and subsistence to the geographical environment (BRAIDWOOD 1960).

Seven years later, Adams gave some public lessons, later on collected in his famous book *Evolution of Urban Society*; here (Fig. 2) the three main phases of the state organization in Mexico and in Mesopotamia were interpreted as the result of a cumulative change, made of slow and long-lasting progressions alterned to sudden jumps toward a more complex social structure, in his own definition a "ramp and step model" (graph B) that could overcome the idea of a long and undisturbed progression (graph A) or his antithesis, an image of social evolution seen only as a product of sudden breaks with the preceding phases (graph C).

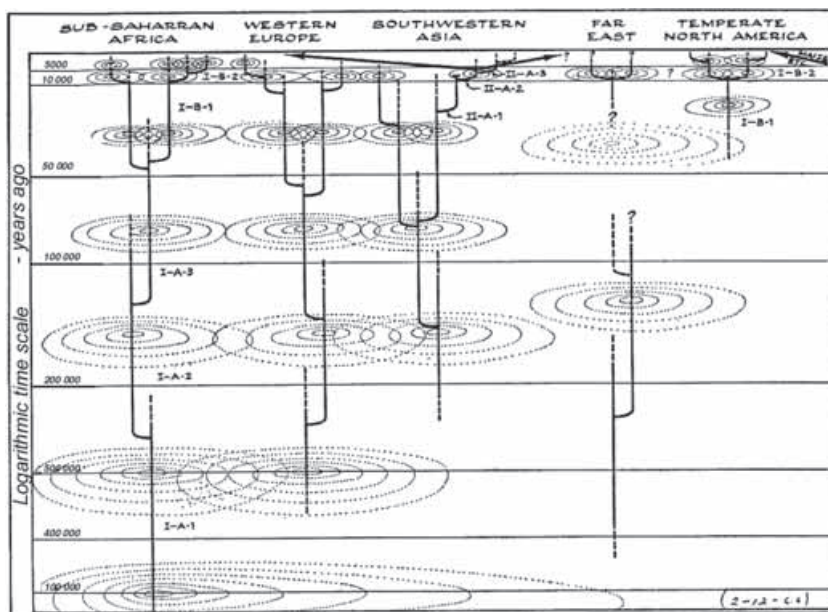


Fig. 1 – The model presented by Robert Braidwood in the Chicago 1959 congress (from BRAIDWOOD 1960).

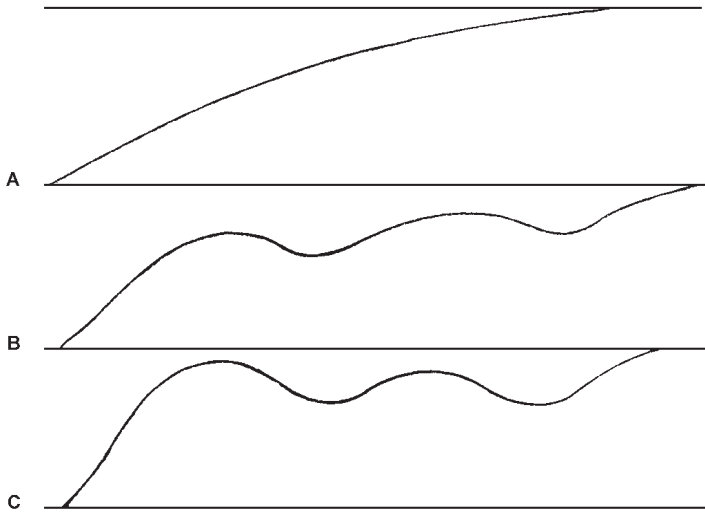


Fig. 2 – Three different trajectories of social evolution (from ADAMS 1982).

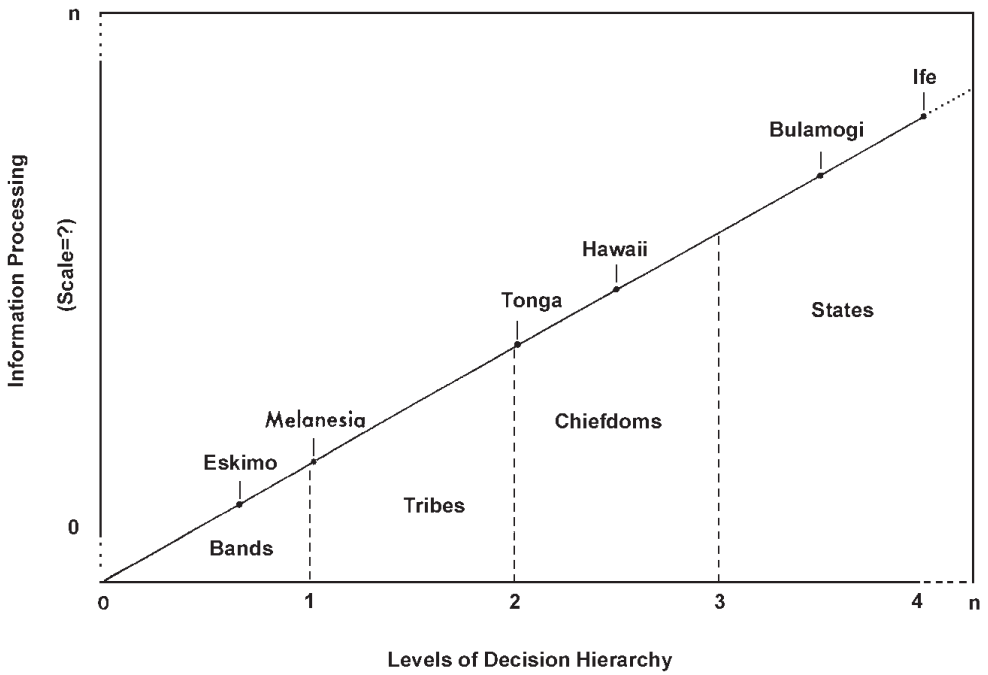


Fig. 3 – Levels of decision hierarchy (from JOHNSON 1973).

Another “jump” in the history of archaeological theories can bring us to the early 70s, when the field was dominated by the New Archaeology.

A real obsession with models was combined, in this movement, with the cultural hegemony of neoevolutionist theories; a good example is the model on “levels of decision hierarchy”, elaborated by one of the best pupils of Adams, Greg Johnson (JOHNSON 1973).

Here each following stage of social evolution (identified with the canonical and then widely accepted sequence of Elman Service “band-tribe-chiefdom-state”) is characterized by growing numbers of decisional levels whose correlate in the ethnographical (and archaeological) record is a corresponding number of settlement hierarchical levels (Fig. 3).

Paradoxically, we can define as a real “loss of innocence” (a classical slogan of the New Archaeology) only the following developments of the debate in the 80s and in the 90s. The new theoretical acquisitions can be better understood, in the big (and dangerous) sea of the literature, along three (often converging) lines of enquiry.

## 1. QUESTIONS OF CLASSIFICATION

Not only the “classical” four or three stage schemes by Elman Service (SERVICE 1983) and Morton Fried (FRIED 1967) have been questioned (the best example is the classification proposed by Johnson and Earle in 1987, primarily based on the “quantitative” composition of primitive communities: JOHNSON, EARLE 1987); an heavier and more pervasive attack was launched against each of the social formations defined by Service.

A good example are the “transegalitarian societies”, created by Brian Hayden as an alternative to the traditional “tribe” (HAYDEN 1993, 1995). The three following stages here detected (groups dominated by despots, reciprocators and, in a phase characterized by an incipient stratification, by entrepreneurs, individuals whose ritual activity is directed toward the creation of a personal profit) are characterized by an exasperate (and sometimes disturbing) accent on the concept of leadership (Fig. 4).

A more complex and always changing debate regards the chiefdoms.

On one side we see the trend of considering chiefdoms only as a developed variant of tribal systems that can bring, depending on their (collective or individualising) structure – as we see in this model proposed by K. Kristiansen (Fig. 5) – to different types of “early state” (this too a concept absent in the “classical” neoevolutionist sequence) (KRISTIANSEN 1991).

On the other side some Spanish scholars, as Nocete Calvo and Lull, see only few differences between the main cultural traits of chiefdoms (power heredity, military coercion, boundaries formation, etc.) and the characteristics of the early states (LULL 1983; NOCETE CALVO 1989, 1994).

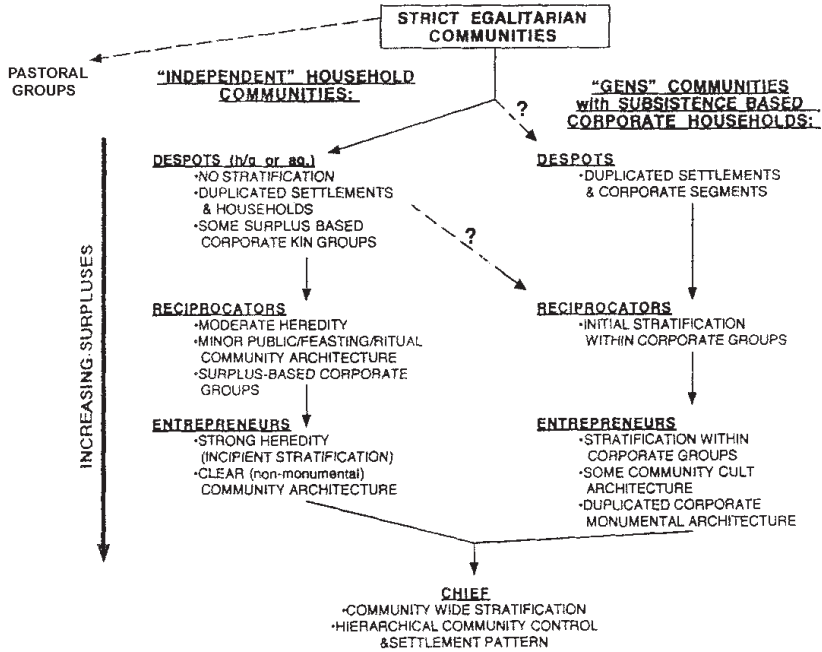


Fig. 4 – Models of development of transegalitarian societies (from HAYDEN 1995).

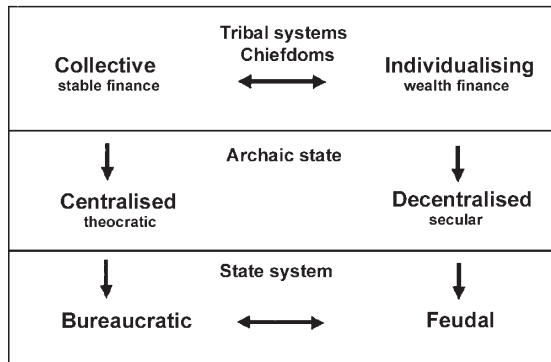


Fig. 5 – A model for “collective” and “individualising” chieftoms (from KRISTIANSEN 1991).

Last, but not least, in a time of crisis and disenchantment of any political Left, we must point out the re-discovery of always more often utilized Marxist categories, as the primitive communism (or communal mode of production, in the convincing definition by Richard Lee) and the Germanic mode of production, a typical trait, according to Antonio Gilman, of many European protohistorical societies (LEE 1990; GILMAN 1995).

## 2. BIRTH AND DEVELOPMENT OF INEQUALITY

One of the everlasting traits of social evolution theories is the attempt to date the period of appearance of inequality.

If Barbara Bender repeatedly described the Neolithic revolution as an effect (*and not a cause*) of the social stratification, Malcolm McKay and, more recently, Brian Hayden pointed to the “affluent” societies of Upper Palaeolithic as the best candidates for the emergence of more or less permanent leadership in prehistoric societies (BENDER 1978, 1990; MCKAY 1988; HAYDEN 1993, 1995).

In the last years a wide group of scholars (mainly post-processualists and some Marxist one, like Randall McGuire) focussed their analysis on the concept of inequality, centered on sex and/or age, as one of the structural traits of any human society; at the same time, many of these scholars, borrowing one of the preferred analytical “tools” of the post-processual school, pointed to the concept of ideological “masking” of complexity in the archaeological record (see, for example, the egalitarian self-image of the élites in the burials) (FLANAGAN 1989; MCGUIRE 1992; PAYNTER 1989; PAYNTER, MCGUIRE 1991).

Another point of convergence is the individuation of the control of some strategical resources as the real “prime mover” of social complexity.

This is the origin of the theory elaborated by Earle and D’Altroy on the mobilization of subsistence goods (staple finance) or of prestige goods (wealth finance) as two different pathways to complexity (D’ALTROY, EARLE 1985; see also, here, the model by Kristiansen at Fig. 5); an original alternative view, based on the analysis of European prehistorical settlements and on the observation of the ethnographical record has been proposed by Gary Webster, who considerates the control of human work (or, if you prefer, the ability of the leaders to concentrate in one place the biggest number of supporters) as the main mechanism of social stratification (WEBSTER 1990).

## 3. DIFFERENT PATHWAYS: DEVOLUTION, CYCLICAL DEVELOPMENT, ETC.

A sort of “revolution” in evolutionary biology from the 80s, with the punctuated equilibrium theory by Eldredge and Gould, made aware archaeologists of the discontinuities and contradictions of trajectories of social change in the past (see, for example, DUNNELL 1981; CHERRY 1984, 1986; SPENCER 1990; TOSI 1994).

Devolution (TAINTER 1988) and/or resistance to political control became two popular items in the recent literature. Many scholars (mainly of Marxist formation) tried to demonstrate how these two aspects were linked in primitive societies.

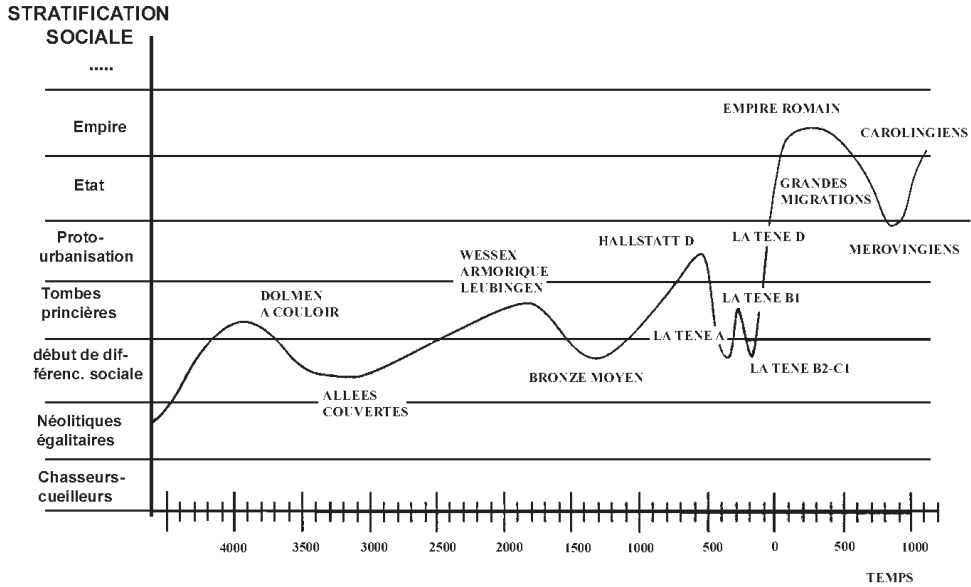


Fig. 6 – Fluctuations of social stratification in NW Europe (from DEMOULE 1993).

Two examples, from a round table held in France in 1990, can help us. The first one is a paper by Jean-Paul Demoule (DEMOULE 1993), based on the idea that social evolution in prehistoric Northwest Europe is characterized by fluctuations between phases of archaeologically well detectable strong power concentrations (Late Neolithic with rich megalithic burials, Early Bronze Age cemeteries or protourban centres of Hallstatt D) and other (Copper Age or La Tene A period) whose low profile is the result of a more or less spontaneous opposition to an unequal and centralized structure (Fig. 6).

The second, inspired to the theories of Ilia Prigogine, is a model for the prehistoric development of central Europe elaborated by Patrice Brun: here the rule, in the most general framework of a chaotic system, is the always possible choice toward more or less complex structures (Fig. 7) (BRUN 1993).

As a further example of alternative pathway to complexity we can remember the optional strategies model elaborated by Maurizio Tosi (TOSI in press) to explain the primacy of the egalitarian ideology in each evolutionary step typical of nomadic populations opposed to the always growing forms of ceremonial inequality of the sedentary populations (Fig. 8).

Further on radical and provocative is the proposal of Norman Yoffee (YOFFEE 1993) to considerate bands, tribes, chiefdoms and states as four possible evolutionary trajectories from a common “bandishness” origin (Fig. 9).

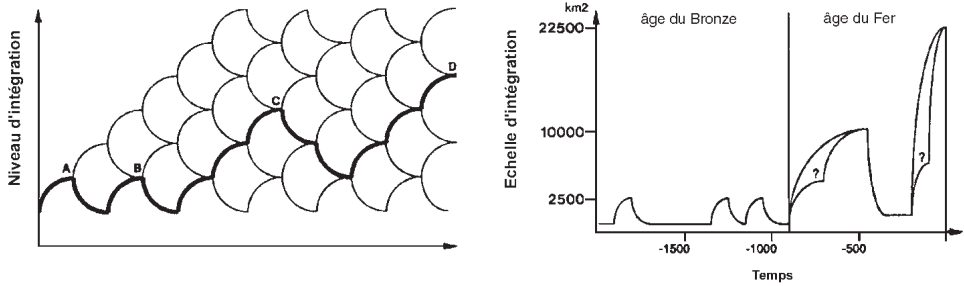


Fig. 7 – A model for social evolution in protohistoric central Europe (from BRUN 1993).

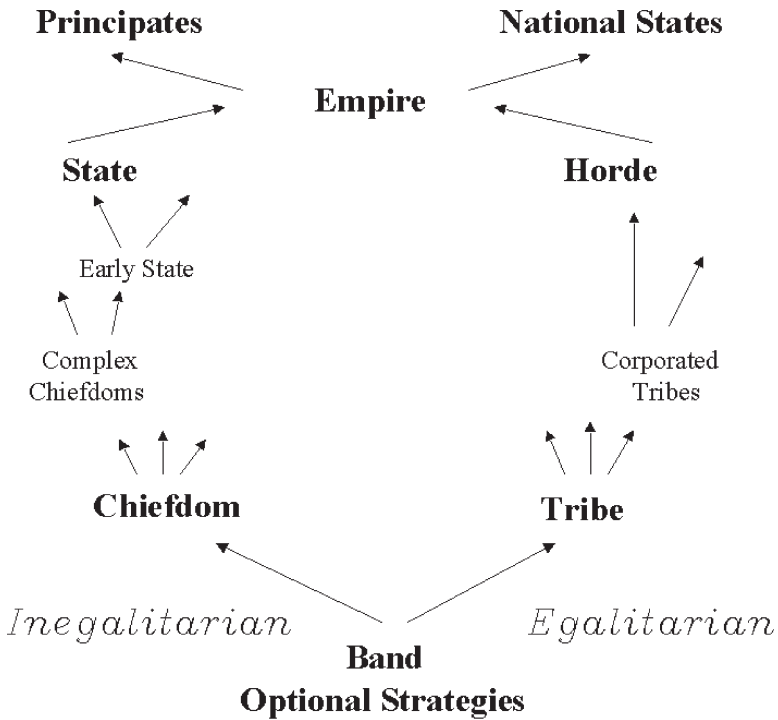


Fig. 8 – Different pathways toward social complexity in sedentary and nomadic societies (from Tosi in press).

A review of social evolution models in archaeology can't avoid a confrontation with one of the most successful explanatory tools used by many European and American colleagues in the last years: the World System Theory (WALLERSTEIN 1974).

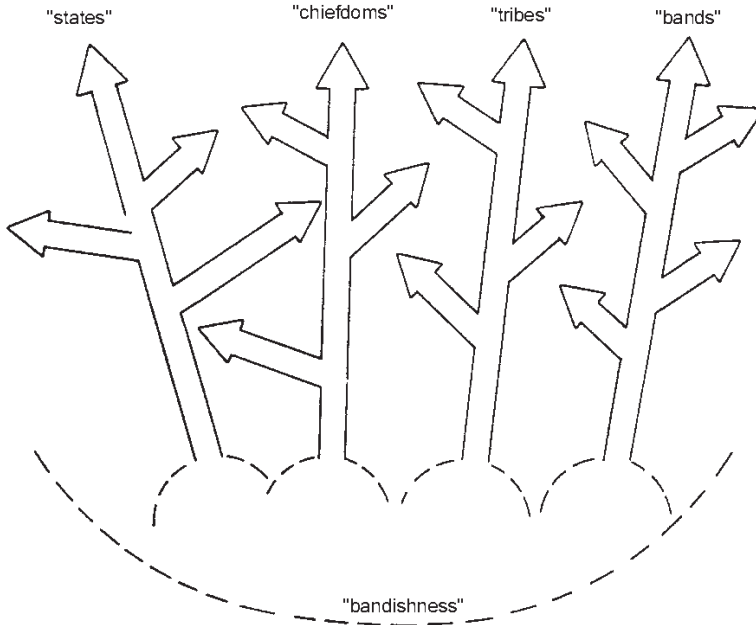


Fig. 9 – Possible evolutionary trajectories (from YOFFEE 1993).

In this case we have to do with a sort of totalizing approach, a real theory (as indicated by the name) based on the idea that the contact between “nuclear” and “peripheral” areas is the prime mover of social evolution.

With all the possible variants (e.g. the presence of many nuclear regions, the role of “marginal” areas, the possibility of inversion between core and periphery, and so on) the theory has been applied to the prehistory and protohistory of Central Asia, Near East and Europe by many scholars - between them Phil Kohl, Mike Rowlands, Andrew Sherratt and Kristian Kristiansen (KOHL 1978, 1984, 1987, 1992; ROWLANDS *et al.* 1987; SHERRATT 1993; KRISTIANSEN 1987, 1989, 1998).

In his recent synthesis on prehistoric Europe, Kristian Kristiansen (KRISTIANSEN 1998) proposed an original model of long-term cyclical shifts between periods, characterized by “peer-polity” interactions (see, for this concept, RENFREW, CHERRY 1986) and others dominated by centre-periphery relations between Europe, the Mediterranean and the Near East (Fig. 10).

Although stimulating, the attempts to find a unified approach for the history of prehistoric European social evolution come into conflict with the complexity of the archaeological record in each geographical district of the Old World.



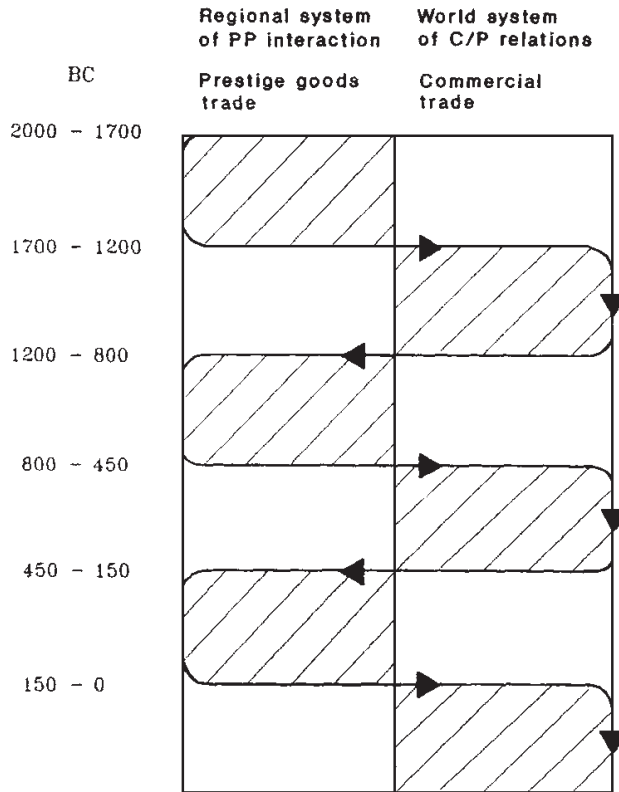


Fig. 10 – Cyclical shifts between regional and world system in European prehistory and early history (from KRISTIANSEN 1998).

An example of the trajectories of development, crisis or devolution in some European territories between the Middle and the Late Bronze Age shows an impressive diversity; the only common trend that can be detected is the attempt, after the collapse of one socio-economic system, to build a replacement, which was often more complex than its predecessor (GUIDI, STODDART 1998). The cyclical trajectories of growth, development and collapse of Bronze Age European communities seem to be linked with the failure of chiefdom-like societies to cope with their growing complexity (Fig. 11). It is no chance that Etruria, the region in which the change seems to be more gradual during the whole second millennium B.C., was the setting of the most spectacular growth, at the transition to the first millennium B.C.: the emergence of the first State system of Western Europe.

The panorama of theories on prehistoric social evolution is rapidly changing; today, the dichotomy between egalitarian and stratified societies

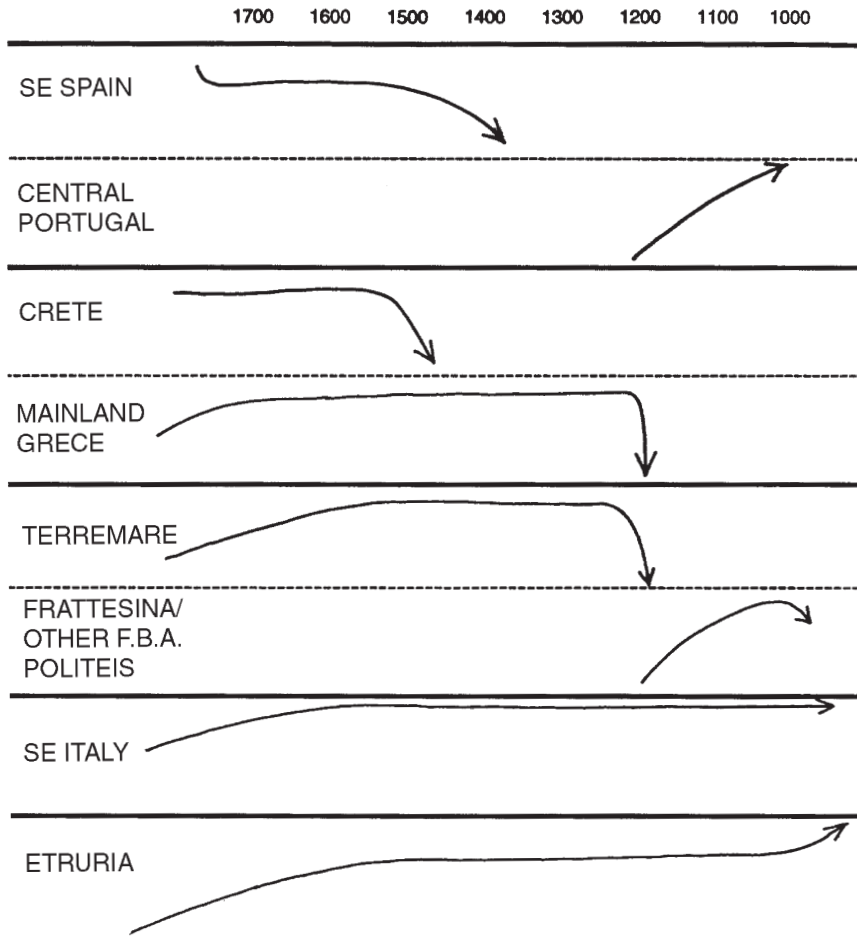


Fig. 11 – Trajectories of development, growth and collapse in protohistoric Europe (from GUIDI, STODDART 1998).

has been replaced by a more realistic idea of more or less hierarchical patterns of organization in every type (also the simplest one) of social structure.

In opposition to the traditional idea that the state systems constitute the most structured types of social organization, we can hypothesize that their real innovation is the definitive overcoming of the complex articulations of primitive societies.

At the same time, the archaeological record demonstrates that continuous fluctuations of evolutive growth only in few cases can bring to the achievement and eventual overcoming of thresholds of complexity.

Forty-two years after the publication of Braidwood's first model, in a period in which archaeological theory wasn't still popular, we have to do with a curious situation: the enormous gaps of the archaeological record seem tragically inadequate to cope with the ever more growing refinement of theoretical perspectives.

Not only we need a better insight in the depositional and post-depositional processes responsible for the formation of the archaeological record; the surveys conducted on a regional level and the massive employment of GIS demonstrate the importance to reconstruct the network of productive activities (cultivated fields, workshops, pastures, etc.) often not directly perceivable in the traditional settlement and/or burial excavations.

At the same time, only computer-aided methods of excavation and the implementation of the existing databases can give us a better understanding of the chronological and functional variability in the phases of occupation of a site.

In any case, surveys and/or excavations are still the best tests for our hypothesis; a continuous strengthening of their methodological aspects seems to be, today, the most important challenge for any archaeologist.

ALESSANDRO GUIDI

Dipartimento di Discipline  
storiche artistiche e geografiche  
Università di Verona

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A. Guidi

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#### ABSTRACT

In the last fifty years, many types of models on ancient social evolution were created, in the Old and New World. This paper reviews the most influential ones, trying to summarize the recent, radical changes in the theoretical perspective on the emergence, development and collapse of complexity in human societies. The most serious problem, today, seems to be an enormous gap between the inadequacy of the archaeological record and the growing refinement of theories.