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Robert Cliquet, *Biosocial Interactions in Modernisation*, Brno, Masaryk University Press, 2010, 693 pp.

# **INTRODUCTION**

The title of this book is very well chosen. It really focuses on biosocial interactions – the mutual influences of biological and socio-cultural phenomena. There is neither a reduction to biological factors, nor a treatment of social phenomena in isolation from biological ones. This could be encouraging to social scientists, given the many pretensions of biological reductionism that we so often come across these days.

The book has a very clear structure. From a sociobiological perspective it explores age, and sexual, family, reproductive, social-class, racial and intergenerational variations. In the final chapter, the book focuses on ethical and policy aspects. Because of its structure, I shall first summarise the book chapter by chapter. Following that, I shall put forward a number of sometimes critical but mostly positive comments.

# EVOLUTIONARY BACKGROUND OF BIOSOCIAL INTERACTIONS

The book has two main goals. The first is to inform social scientists (and others) about the powerful contributions made by evolutionary biology to our understanding of (the evolution of) human societies. The second is to demonstrate the relevance of new knowledge and insights for understanding the problems facing modern societies.

Looking at the theoretical background, it is important to note that Cliquet is not an old-fashioned Darwinist who thinks in terms of individual selection and survival of the fittest. Cliquet builds on the achievement of the so-called Second Darwinian Revolution (from the 1960s onwards), which produced many insights useful for analysis of human group life. On the very first page of the

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introduction Cliquet makes a number of statements, which are supported by the results of the Second Darwinian Revolution:

- Sex and gender need to be studied by understanding the mechanisms of sexual selection and the origin and evolution of sexual dimorphism (men being taller than women, etc.).
- The study of family structures requires insight into mating strategies.
- Knowledge of selective processes and 'inclusive fitness theory' is required for understanding parental investment and fertility behaviour.
- The study of social mobility requires knowledge of 'polygenetic inheritance'.
- Knowledge of the evolutionary background of the in-group/out-group syndrome is necessary for understanding racism.

Among the results, inclusive fitness (Hamilton 1964), kin selection (Maynard Smith 1964), and reciprocal altruism are of immediate importance for the sociobiological study of (the evolution of) human societies. The principles of inclusive fitness and kin selection relate to individuals helping their relatives who, as we know, have similar genes. Reciprocal altruism refers to mutually helpful behaviour in the expectation that the other will 'return a favour'. The underlying strategy is akin to the well-known 'tit for tat' strategy, which can solve the 'repeated prisoners' dilemma. Without these behavioural predispositions social life would be impossible<sup>2</sup>; they form the sociobiological foundations of the study of social life.

Concerning the theoretical background, the next important development for Cliquet was the introduction of sociobiology by authors like P. van den Berghe (1979) and E.O. Wilson (1975). Kin selection, reciprocity and social coercion emerged as the major foundations of social life from their work. Today, sociobiology concentrates on the biological evolution of social life in animals and hominids, whereas social biology deals with the interrelations of biological and socio-cultural phenomena in humans.

Nevertheless, Cliquet's sociobiology comprises both sociobiology and social biology as defined in the preceding paragraph. Sociobiology retains his emphasis on co-evolution. For Cliquet, a major finding of sociobiology is the fact that our biosocial nature was formed during a specific era in a specific region by groups of hunters and gatherers: in mid Africa, say 100,000 years

<sup>&</sup>lt;sup>2</sup> Rosemary Hopcroft, the author of the first introduction to sociology based on a biosocial foundation, lists the following: selfish behaviour, reciprocal altruism, kin-based altruism, gender asymmetry in parenting, gender asymmetry and sex differences in mate choice and family roles. Rosemary L. Hopcroft: *Sociology: A Biosocial Introduction*, Boulder – London, 2010, pp. 25–32.

ago, in the so-called Environment of Evolutionary Adaptedness (EEA). The main hypothesis put forward by Cliquet is that the human genome that came about was adapted to the EEA, but not to the new environment of modern science, technology and humanistic values; in short, our genome is incompatible with the societal results of modernisation. The next eight chapters examine this hypothesis, followed by a final chapter devoted to the ethical and policy implications of the results.

Cliquet distinguishes eight forms of variation in society: individual variation, age variation, sexual variation, family variation, reproductive variation, class variation, racial variation and intergenerational variation. He sets out to explore the evolutionary background of these variations and argues for the existence of maladaptive practices, which amount to retaining practices adapted to the EEA. The list below displays the variations distinguished together with the corresponding maladaptive practice:

- Individual variation and individualism
- Age variation and ageism
- Sexual variation and sexism
- Family variation and familism
- Reproductive variation and natalism
- Class variation and classism
- Racial variation and racism
- Intergenerational variation and eugenism

The precise meanings of the maladaptive practices are explained in the corresponding chapters.

### INDIVIDUAL VARIATION AND INDIVIDUALISM

An important theme concerns the level of selection: should individual or group selection be seen as the mechanism? The classical Darwinian position is that selection takes place only at the individual level, parents passing on their genes to offspring. More recently, however, the possibility of group selection has been defended. Helping behaviour and abiding by group norms can strengthen the chances of survival of the (members of the) group involved: group selection, very much in line with the functionalist school in sociology, with representatives like Parsons.

Avoiding the major pitfalls of this approach, Cliquet opts for this position, more specifically between-group selection, which of course is also clearly in line with his general position on biosocial co-evolution. Interestingly, processes of group selection always start with the individual, e.g. helping behaviour. This

implies that the biological theory of group selection has a micro-foundation, quite similar to methodological individualism in the social sciences. The general conclusion Cliquet draws is that we have both individual and group selection.

Cliquet approaches questions concerning the relations between genetic and environmental causes of individual variations in a similar way. He points out that genetic and environmental factors are always involved, though their weights do vary. The relative weights of genetics and the environment can be calculated at population level for traits that vary quantitatively, e.g. body length and intelligence. These features vary quantitatively because many genes are involved in producing the trait, each adding a part to the quantity: polygenetic inheritance.

For intelligence it has been found that about 70 per cent of the differences can be explained by genetic factors, leaving 30 per cent to environmental influences. The within-family biological environment plays a substantial role here: general health; suppression of diseases; improved nutrition; increased (but not too high) age at which women have children; healthy lifestyle during pregnancy; more favourable obstetrical care; avoidance of premature birth, low birth weight and breastfeeding.

Research into biological influences on individual variation is surrounded by ideological controversy. Notwithstanding the study of criminal behaviour, it has yielded an impressive number of results. It is assumed that norm-violating and criminal behaviour are maladaptive. A maladaptive trait is defined as follows:

- Intragenerationally (ontogenetically) it decreases the development of human-specific characteristics (e.g. sociality, intelligence);
- Intergenerationally (phylogenetically) it decreases genetic fitness (intergenerational transmission of genes).

Progress in genetics, neurology and evolutionary biology accounts for most of these results. Note that the factors found do not act in isolation and often work indirectly, for instance via low intelligence. Cytological research (the study of cells) has found a cell type (XYY) the carriers of which are relatively more present in penitentiaries and psychiatric institutions, are very tall, have a high level of testosterone, show somewhat lower average intelligence, and who have a higher propensity towards aggressive behaviour. Multivariate research shows that the XYY karyotype is not directly related to norm-violating behaviour, but indirectly – via a lower level of intelligence. It is also generally the case that a lower level of intelligence is related to norm-violating and criminal behaviour. Geneticists have discovered a mutation (to be precise, of the MAO-A gene on the X-chromosome,) which causes extremely violent behaviour,

though again indirectly – in this case through neurotransmitters. From studies on twins the insight emerged that the presence of particular genotypes (to wit, shared monozygotous ones) in criminogenous circumstances can more easily lead to criminal behaviour. From adoption studies we know that the influence of the biological father on the criminal behaviour of the adopted person is twice to three times as large as the effect of the adopting father. But Cliquet warns that it is important to bear in mind that increases in levels of crime in recent decades in some countries is related strongly to factors such as family breakdown, a break-down of morality, and increased intellectual demands in job recruitment.

As already stated, Cliquet calls the maladaptive trait associated with individual variation "individualism". His conception of this is close to outright selfishness and inclination to aggressive competition. Of course, Cliquet holds the value of the individual in high esteem. He names the adaptive variant of individualism "individuality".

## Age Variation and Ageism

Hominids and humans got older during hominisation. The fundamental factor that triggered many of the others is brain growth. Cliquet argues that ageing and death are evolutionary phenomena. The most influential explanation builds on the fact that after the reproductive period in human life the forces of natural selection disappear, making humans more vulnerable to deleterious mutations until eventual death. Cliquet also mentions the mechanism of antagonistic pleiotropy (the control of more than one phenotypic characteristic by a single gene or set of genes,) where the same individual genes which enhance characteristics during the reproductive period actually reverse them in later years. In contrast to this, continued increases in life expectancy can be foreseen through further medical progress and lifestyle interventions, like decreased levels of smoking, improved nutritional habits, increased physical exercise, a limiting of calorific intake and also through pharmacological interventions.

As to the burden of elderly dependency, Cliquet reports that many demographic-economic simulations have supported the argument that a reasonable rate of economic growth will absorb this problem. Cliquet assumes a more reserved position on the costs of health and welfare. The chapter contains a lengthy and thorough discussion of the many dilemmas that can be observed in medical care for old people in general, and in particular for people in the terminal stage of life.

Cliquet considers some of the dilemmas caused by traditional values, which are not compatible with the pursuit of human well-being in modern society. He observes that ageism is less researched than other -isms and apparently still socially accepted.

# Sexual Variation and Sexism

According to Cliquet, sexual procreation is inefficient as it only uses half of the available genes, but due to the genetic variation it brings about it offers more protection against risks. Sexual selection is a major mechanism in the emergence of sexual variation. It is defined as the evolutionary mechanism by which individuals acquire reproductive advantages over other individuals of the same sex and transmit these characteristics to their descendants of the same sex. Among men it is a matter of competition for females; among women it is a matter of choice of male partners. Thus mating strategies are the vehicle here. Women invest more in their offspring and choose a relatively peaceful mating strategy, while men who are predominantly interested in the size of their offspring chose a more violent strategy, which as a side effect gives them a larger and more robust body build. This is a major feature of the dimorphism seen between men and women.

After an analysis of the ontogenetic determinants of sexual variation, Cliquet again argues against a mechanical understanding of the 'nature versus nurture' dichotomy: gender is the result of the interaction of biological factors (genetic, hormonal, neurological, etc.) with socio-cultural learning and conditioning processes. From a biological point of view women are the stronger gender. An important reason for this lies in the fact that early on, during the embryonic development of the female foetus, one of the X-chromosomes in each cell is deactivated. This random process leaves the foetus with approximately 50% of his or her X-chromosomes from the mother and father respectively. This leads to a heterogeneous composition of the female body that protects against genetic impairments. Males miss out on this protection.

The concept of "sexism" has been coined to define ideological and social systems in which sexual variation is used as a primary criterion to assign normatively differentiated and valued roles and tasks in society. Sexism has prevailed, though to varying extents, throughout evolution of mankind. Women have only recently begun a process of slow and gradual improvement of their social position.

In modern society sexism is maladaptive. Cliquet considers modern biological knowledge the ultimate basis for female emancipation and puts forth a number of arguments. Biology refuted traditional views on the nature of the sexes, and destroyed the even earlier ideological foundation of sexual inequality and inequity. Bio-medical knowledge has induced revolutionary control over mortality, and enabled control over fertility – the ultimate positive condition for women's emancipation. Modern technology is increasingly eroding males' traditional physical advantages with respect to muscular strength and

speed. In addition, sociobiology frames human sexual dimorphism in an evolutionary perspective: it has reduced markedly, but it has not fully disappeared.

#### Family Variation and Familism

The family is a typical biosocial group phenomenon. It comprises sexual relations between the adults and reproductive relations between the generations. Siblings share many genes, and in addition share a largely common environment, which influences their phenotypical development. The evolutionary framework for the study of biological families is based on three conceptual pillars: ecological constraints, inclusive fitness and reproductive inequality, which reflects the dominance of particular individuals in reproduction.

Families are the social extension of intra-uterine life, based upon the needs of slowly maturing human children, several of which have to be produced to guarantee intergenerational continuity. They are not always successful in avoiding emotional deprivation or their consequences in the form of behavioural disturbances and physical retardation.

Even love, a phenomenon that can be found everywhere, is an evolved feature, selected for its function in meeting the needs of slowly maturing offspring. This is the case despite the existence of arranged marriages and the mildly polygamous nature of our kind. Humans have competing drives with variable winners due to changing socio-ecological circumstances.

The modern family transition is caused by three factors: socio-biological factors, socio-economic factors and socio-cultural ones. The shift to a combination of low mortality and low fertility has amongst other things turned partnership into a lifelong probability. The shift of the family from a productive unit to a consumptive unit, with people working outside the family, has contributed to the independence of many family members and to the substitution of social security systems for intra-familial arrangements for coping during times of hardship. Divorce has taken the place of widowhood as the main cause of couple disruption. Enormously extended leisure opportunities compete with traditional family values and patterns, demonstrated not least by the declining desirability of large families. The growing influence of individual preference has also led to situations where individual and societal needs, with respect to intergenerational continuity, no longer always coincide.

Concerning the future of the family, Cliquet argues that with modernisation society clearly evolved from a uniform ideal towards a tolerant acceptance of pluriform variation – an outcome of individual choice. The shift from a social to a more personal choice of partner and relational continuity, including the possibility of splitting up and establishing a new relationship, results in more gratifying relationships and an increase in marital or relational happiness. The frequency of single-parent families, a vulnerable category – under present con-

ditions headed mostly by women –, will probably increase. The number of successive monogamous relationships will increase, in combination with a more supportive attitude to former family members. Unmarried cohabitation and same-sex relations may continue to increase. The option of temporary and variable relationships will gain ground, especially among young men. Because living conditions in modern culture promote emancipatory ideologies, particularly for children and women, all forms of forced partnership or sexual exploitation are expected to become rarer. Finally, it may be expected that most of the population will continue to consider the family the most important unit for physical care and emotional security.

### Reproductive Variation and Pro/Anti-Natalism

Humans have strong sexual drives and are geared by evolution to the maximisation of inclusive fitness, i.e. to maximise their genetic representation in future generations, in the context of constraints set by the environment and their phylogenetic past.

The second demographic transition has resulted in a combination of low fertility and low mortality. Fertility is even limited to below replacement levels. In this respect, Cliquet reviews the cultural evolutionary hypothesis and the twochild family hypothesis. According to Cliquet, the availability of many effective methods of birth control is the most important factor. This enabled the Neo-Malthusian transition, in which fertility was reduced by rank-specific birth control methods.

The most important result of effective fertility control is the liberation of men and especially women from the constraints and uncertainties of the past. The number of children and the duration of birth intervals can be planned. It is expected that in the future prospective parents will be selected on the basis of positive attitude to childbearing. This is related to increased parental investment in children, not only by women but also by the 'new father'. In the long run, below-replacement fertility individuals and couples will be out-selected.

Cliquet makes some arguments in favour of replacement fertility, including avoidance of excessive population ageing due to de-juvenation, the same of sustained population decline, and limiting in-group/out-group conflict due to strong immigration flows. Cliquet strongly argues that old-fashioned pronatalism, an ideology that advocates childbearing, is losing against the forces of modernity, which include concerns about below-replacement levels. He says the required shift from quantitative to qualitative reproductive efforts in modernisation is completely in line with the evolutionary trends that resulted in hominisation.

## Social Class Variation and Classism

Human societies exhibit differences in wealth, power and prestige. In addition, different positions and functions are differentially evaluated. In modern societies the hierarchy of functionally necessary social activities is increasingly determined by knowledge and responsibility; this requires the presence of a particular biological (physical, as well as mental) endowment and equipment of the individual. The sociobiological question here concerns the exact means by which biological variation and social differentiation interplay. Inequalities in social status in human societies are in line with dominance hierarchies among other social animal species.

According to Cliquet, the evolutionary background of differences in social status is ultimately a reflection of differential reproductive fitness: at the individual level we observe the maximisation of inclusive fitness, within-group competition for scarce resources leading to social hierarchies. While at the group level we see group stability favouring the transmission of communication, inter-group conflict or competition for resources.

Cliquet employs a much more precise approach to biosocial interactions, as it is strongly empirically oriented and bi-directionally oriented in its observation of the associations between biological variation and social differentiation. It considers both genetic and environmental mechanisms of biosocial interaction, which can be seen in the important distinction between social assortment on the one hand, and social selection and environmental influences on the other.<sup>3</sup>

### Racial Variation and Racism

This chapter investigates racial variation and racism only indirectly. It is primarily about the biosocial aspects of all forms of inter-population variability and their varying relationships to racism, ethnocentrism and xenophobia.

Biology has a specific definition of race: "a population that distinguishes itself statistically significant from other populations in the distribution of genetically possible alternative characteristics of chromosomes". This definition differs clearly from the definitions used in racist theories that we may recognise from history. Those definitions are based on group differences, for example skin colour and bodily adaptations to climate. Between-population biological differences have both genetic and environmental backgrounds.

<sup>&</sup>lt;sup>3</sup> By social assortment we mean 'the sociological processes leading to differences between groups', and by social selection we mean 'natural selection based on average reproductive fitness values between groups that differ in a number of genetic traits'.

Race, ethnic group and state/nation are different concepts. Only race is a biological concept; ethnic groups are related to cultural identities (language, religion); state/nation is a political concept. The biological variations between populations have diverse causes:

- Splitting of populations, resulting in genetic isolation and involving 'genetic drift';
- Fusion or interbreeding of populations, as a consequence of migration or contacts with neighbours;
- Adaptation of populations, as a consequence of mutation and selection in different environmental living conditions.

Looking at these causes in Cliquet's book, we can see that thanks to very recent scientific methods it is possible to construct tree-diagrams that show the historic processes leading to the emergence of genetic distance between populations. Fusion often has the consequence of social exclusion on the basis of 'unfavourable' phenotypic effects. But heterosis, the strengthening of favourable qualities, is also possible. The most well-known adaptations are skin colour and bodily adaptations to climate.

Ultimately, Cliquet makes it very clear that dogmatic racist theories go against all existing biosocial knowledge we have of variation among and between human populations.

### Intergenerational Variation and Dysgenism

Intergenerational changes in the genetic composition and genotypic structure form the essence of biological evolution, and are accompanied by phenotypic changes of individuals and populations. Modern culture introduced a number of effects working against natural selection: in medical practices like replacement therapies, but also in differential reproduction with respect to intelligence.

That reality can be complex and surprising, as can be seen in the so-called IQ paradox, i.e. the rise in mean IQ during the twentieth century, where as a consequence of birth control methods a decrease was expected; birth control having started among higher educated people. The most plausible explanations blame environmental influences. Cliquet adds that the dysgenic effect<sup>4</sup> might in the near future reverse as a consequence of progress in genetic knowledge, genetic engineering, increased expectations about quality of life, and adaptation of norms to newly created genetics and demographics.

<sup>&</sup>lt;sup>4</sup> Dysgenic effects are defined by the accumulation and perpetuation of defective or disadvantageous genes and traits in offspring of a particular population or species.

### Ethical and Policy Considerations Regarding the Biosocial Future of Humankind

Cliquet's starting point consists of important discrepancies between humanity's evolutionary-biological background and the opportunities offered – and demands made – by modernity. According to him, we face six major ethical dilemmas concerning intervention versus non-intervention, quality versus quantity, equality versus inequality, co-operation versus competition, out-group versus in-group.

The discrepancies between the evolutionary-based genetic endowment and the demands of modern living conditions are due to the fact that the human genome is still largely adapted to the EEA: people neurologically adapted to life in small groups; endowed with strong kin and in-group drives protecting them from other groups; given to resource acquisition because of scarcity; combined high mortality and high fecundity and sexual specificities adapted to raising slowly maturing offspring.

In modern societies people live in large groups, limit their fertility, raise offspring who take ever longer to mature, see – or rather don't see – in-group drives losing their protective qualities, and feel the clash between traditional values and norms and the demands of modern life. According to Cliquet, the key to responding to these requirements lies in combating individualism ( $\neq$ individuality), ageism, sexism, familism, pro-natalism, classism, racism and dysgenism.

## SUMMARY

To readers with a social science background the book offers the best available introduction to biosocial interactions in modernity. After the 'oversocialised conception of man' and 'rational choice theory' we now have a modestly realistic theory of human behaviour, useful for social science explanations. The fact that there is neither reduction to biological factors, nor a treatment of social phenomena in isolation from biological ones sets Cliquet apart from the many pretensions of biological reductionism that we so often come across these days. A major line in reductionism is the unwarranted leap from the correct observation that all human behaviour goes together with brain activity, to the statement that all behaviour is caused by brain activity. Cliquet has shown that much more is going on, namely biosocial interactions.

The detailed analyses of the options and dilemmas humans face with respect to modern medicine and social security address important issues, and in that sense we are (nearly) complete. The approach of religion is clearly biosocial. The major monotheistic religions emerged during a particular stage of the evo-

lution of mankind, and still bear the signs of that origin. This frequently leads Cliquet to criticise their maladaptive positions in modern society (e.g. on fertility control and gender relations), Cliquet instead basing his views on what modern societies require for their functioning.

Is this functionalism rejuvenated? If it is, then I must say that this functionalism, unlike that found in sociological 'grand theory', is parsimonious and empirically founded. Indeed, functionalist thought has always had a stronger foundation in the biological sciences.

This view of the hominisation process combines scientific description and valuation. Instead of displaying a belief in progress, it demonstrates a measure of optimism. The positively evaluated elements include diminishing sexual dimorphism; improvement of cognitive performance, emotional life and sociability; a considerable decrease of aggression and aggressive competition; increasing inter-group and inter-individual co-operation; and of course, a thorough rethinking of societal values and norms.

Cliquet is explicit about his values. His rejections of aggressive competition in modern society and the affirmative attention given to the treatment of those who find themselves in unfortunate positions as regards work, disability, disease, and in need of social security, safety nets and similar programmes identify him, to be sure with my consent, as a protagonist of the western European – or should I say northern European – welfare state. Cliquet does not address the question of the economic efficiency of this kind of welfare state, which might expose him to criticisms of protagonists of the deconstruction I referred to.

But he is definitely right: extensive economic, historical and comparative research carried out by Peter Lindert shows that the economic growth realised by these European welfare states is comparable to the 'liberal' economies of the USA and Britain. Moreover, these welfare states also managed to reduce inequalities to a certain extent.

To give a feel of the debate, I cite Lindert here: "We imagine an experiment in which Country A wisely holds down social spending while Country B raises it to a third of GDP, raising marginal tax rates on both the taxpayers and the recipients. Both the taxpayers and the recipients respond by working less and taking less productive risk, thus lowering GDP." And then the cynical continuation: "The problem with this consensus is that the data refuse to confess that things work out that way" (Lindert 2004, Part I, 29–30).

Unfortunately, economic policies are still dominated by economists with strong beliefs in neo-classical theories. It appears somewhat paradoxical that by our evolved nature we have behavioural predispositions for both co-operation and competition – and despite that a modern society has emerged in which aggressive competition strongly prevails.

In spite of the strength of Cliquet's text there are some issues that might have deserved stronger treatment. The picture of our basic hunter-gatherer psy-

chology lacks the detail needed to evaluate individualism ( $\neq$  individuality), ageism, sexism, familism, pro-natalism, classism, racism and dysgenism as implied by our evolved psychology. Not until the introduction to the last chapter did I get to grips with this problem. There, life in the EEA was concisely and clearly compared with modern life.

The empirical validity of the second Darwinian revolution could have been demonstrated more clearly. As it stands, the reader is often 'asked' to consult his or her memory and very general knowledge in order to confirm the assumed generalities.

The theory of inclusive fitness is also a nice cost-benefit analysis, but the reader is hardly informed about the supporting empirical evidence. I will have to assume that it must be available in the results of experimental evolutionary biology. Kurland (1980), who was mentioned in the text, might be useful as it refers to numerous empirical studies.

Related to this is the fact that the paradox of low fertility and low mortality that entailed the second demographic transition is most convincingly explained by a cultural evolutionary hypothesis and by a psychological hypothesis. As a sociologist familiar with the potentials of the repeated prisoners' dilemma I was convinced by the tit for tat elements in the explanation for reciprocal altruism. Overall, this book is admirable. I recommend it to anyone interested in the past,

present and future condition of mankind.

#### LITERATURE

- Cliquet, R. 2010. *Biosocial Interactions in Modernisation*, Brno, Masaryk University Press, 693 pp.
- Boyd, R. and Silk, J. B. 2009. *How Humans Evolved*, W.W. Norton & Company, New York, London, 5<sup>th</sup> edition, 474 pp.
- Hopcroft, R. L. 2010. Sociology a Biosocial Introduction, Paradigm Publishers, Boulder, London, 362 pp.
- Kerstholt, F. 2006. Afbraak verzorgingsstaat brengt duurzame sociale averij: de kosten en baten van verschillende typen verzorgingsstaten. (The break-down of the welfare state entails social damage: costs and benefits of different types of welfare state.) *Socialisme & Democratie*, 63, 5, mei 2006, 53–57
- Lindert, P. H. 2004. Growing Public: Social Spending and Economic Growth since the Eighteenth Century, Cambridge University Press.
- Lindert, P. H. 2007. Welfare States, Markets, and Efficiency: The Free Lunch Puzzle Continues, Presented at Van Leer Jerusalem Institute, 17 December 2007.
- Nolan, P and Lenski, G. 2009. *Human Societies: An Introduction to Macrosociology*, Eleventh Edition, Boulder – London, 409 pp.