

Łukasz Sułkowski

Neoevolutionism – the new paradigm of the social sciences?

Abstract

The neoevolutionary paradigm in the social sciences is in the initial stage of development, although the idea of social Darwinism having been discredited, this is actually its second beginning. It seems however, that neo-Darwinism, closely related to evolutionary psychology, has in the last few decades achieved significant cognitive successes, which make it more respected by philosophers of science. The paper analyses relations between the quickly-developing neoevolutionary paradigm and other paradigms of the social sciences. The basis for the analysis is the suggestion by G. Burrell and G. Morgan to divide the social sciences into four paradigms.

Keywords: evolutionary management, neodarwinism in social sciences, neoevolutionism in management

Introduction

The neoevolutionary paradigm in the social sciences is in the initial stage of development, although the idea of social Darwinism having been discredited [Espina 2005, pp. 175–187], this is actually its second beginning. It seems however, that neo-Darwinism, closely related to evolutionary psychology, has in the last few decades achieved significant cognitive successes, which make it more respected by philosophers of science [Mameli, 2007]. The use of neoevolutionism in research on man, culture and society involves a radical change of perspective in the social sciences and leads to man being dethroned by science once again [Buss, 2008, pp. 36–70]. The history of science indicates that humanity must have gradually rid itself of the conviction of its central role in the universe. The milestones of the emancipation of thought were: the Copernican Revolution, Darwinism and quantum mechanics. Copernicus put an end to the theory that the Earth was the centre of the universe. Darwin and his successors destroyed the image of man as the crown of all living creatures. 20th century physicists described a fundament of reality that proved unimaginable for man and was

based on a coincidence. The time has thus come for another scientific revolution. Neoevolutionism forces its way into the social sciences and leads the challenge to the traditional vision of the subjectivity of man in favour of a hybrid called “the gene vehicle” [Dawkins, 1976].

The paper analyses relations between the quickly-developing neoevolutionary paradigm and other paradigms of the social sciences. The basis for the analysis is the suggestion by G. Burell and G. Morgan to divide the social sciences into four paradigms.

A thesis can be proposed that the opposition: the standard model of the social sciences versus neoevolutionism, suggested by J. Tooby, L. Cosmides and S. Pinker and accepted by most neoevolutionists, is too much of an ideological simplification. In fact, although it proposes a radical change of cognitive perspective in the social sciences, neoevolutionism remains in a more complex relationship with other paradigms of the social sciences [Wilson, 2001; Dawkins, 1976; Hamilton, 1964, pp. 1–52; Trivers, 1971, pp. 35–57].

Structure of a scientific revolution?

In the most popular publication on the philosophy of science in the 20th century, T. Kuhn describes the historical model of the change of paradigms in the natural sciences [Kuhn, 2007]. This has opened a broad debate on the possibilities for the application of the revolutionary science development scheme in the social sciences [Feyerabend, 1996]. According to many researchers, the current stage of development in the social and humanistic sciences does not indicate the emergence of one paradigm; on the contrary, it proves the permanent multi-paradigmaticity of the social sciences. Psychology, sociology, cultural anthropology, economics, linguistics, management sciences, law and the humanistic sciences use many different discourses that are based on various theories, assumptions and terminology [Sułkowski, 2005, pp. 51–54]. 20th century social sciences have also seen many new interdisciplinary concepts. Psychoanalysis, phenomenology and hermeneutics are examples of theories with their own epistemological programmes and ambitions to describe the nature of man and society. None of these concepts have, however, led to a great synthesis or dominated the research perspective of the social sciences. Will this also be the fate of neoevolutionism?

Standard model of the social sciences

According to S. Pinker, the development of evolutionary psychology lead to a decline of the standard model of the social sciences, which dominated the 20th

century thinking of man and society [Pinker, 2005]. It is now being replaced with the neo-Darwinist synthesis, which offers a coherent and complete explanation of human behaviours based on reliable empirical research. Thanks to the use of scientific methods developed by the natural sciences, complemented with some of the traditional methods that are considered bound to the social sciences, it is possible to describe the nature of man and society, and predict and model the changes. It seems, however, that S. Pinker sees his opponent in the form of this “standard model of the social sciences”. In fact, the social sciences have never seen a consensus or a dominant trend in basic cognitive assumptions, research subjects, insight or methodology.

Moreover, in the 20th century, an important role was played by the neopositivist trend in the social sciences, which used an approach that was characteristic of the natural sciences [Morgan, 1983, p. 20]. In my opinion, “the standard model of the social sciences” is one of many trends of reflection in the social sciences, which is not at all of a “dominant” or “standard” character. It is not difficult to give examples of social disciplines and theories that were not compatible with such a model, and with elements of the neoevolutionary paradigm. Looking closely at the development of linguistics, it is difficult to negate the role of N. Chomsky and his nativist concept of language. In sociology, the development of the functionalist and neopositivist trend was also very important, which also used the theory of evolution [cf. Parsons, 1966]. Therefore, neoevolutionism in the social sciences is not developing in complete opposition to previous theories and schools.

While describing the standard model of the social sciences, one can point out a range of categories by S. Pinker, J. Tooby and L. Cosmides [Pinker, 2005; Tooby, Cosmides, 2000, pp. 1167–1178] that constitute its profile. Epistemological dualism involves a diversification of assumptions and methods in experiencing the world of nature and the world of man. Nature is dealt with by the sciences such as physics, chemistry and biology, whereas the human mind, culture and society – by the social and humanistic sciences, such as psychology, sociology, cultural anthropology, political science, economics, management and history. In the social sciences, cognition is based on understanding and interpretation; it is of an individual character. At the same time, it is possible to understand reality in mathematical rules and models. An inter-subjective, or even subjectivist approach indicates fundamental restrictions on the perception of the social world and the lack of possibilities for theory falsification, which often stem from cultural or epistemological relativism. Culturalism is a conviction that, mentally, the human mind is almost entirely shaped in the process of socialisation [Pinker, 2005, pp. 32–52].

According to S. Pinker, neoevolutionism is characterised by assumptions that are contrary to the standard model of the social sciences. In epistemological

monism, the mental world can be described by means of such categories of the physical world as information and calculations with the use of methods from the natural sciences [Pinker, 2005]. In objectivism, which is the main postulate of both neopositivism and neoevolutionism, the social world is cognisable through science. Verificationism and falsificationism involve practising science through seeking to confirm or reject scientific theories (falsificationism by K. Popper) [Popper, 2002]. Epistemological universalism (anti-relativism) is a belief in the possibility of reaching general and unquestionable rules of science based on the correspondence theory of truth. In cultural universalism, surface cultural diversification hides universal mental mechanisms that constitute “human nature” [Pinker, 2005]. In comparison, according to evolutionary cognitivism, human cognitive skills find their place in the brain, whose development results from the coupling of genes and the environment, and were created in the process of biological evolution [Pinker, 2005, pp. 66–70].

Table 1. The standard model of the social sciences versus neoevolutionism

Criterion	The standard model of the social sciences	Neoevolutionism
The nature of reality and cognition	Dualism	Monism
Characteristics of cognition	Subjectivism and inter-subjectivism	Objectivism
Epistemological assumptions	Interpretivism or constructionism	Verificationism or falsificationism
Influence of the context of cognition and culture	Cultural or cognitive relativism	Epistemological and cultural universalism
Subject's cognition of reality	Essentialism	Evolutionary cognitivism
Research methodology	Understanding, hermeneutics, phenomenology (search for meaning)	Cause-effect explanation, experimental method

Source: Own work.

Neoevolutionary paradigm

The theory of evolution is based on the concept of natural selection and functions as a paradigm of the biological sciences, which has a growing use in the social sciences [Barkow, 2006]. Natural and sexual selection of behaviours assumes that in the long-term perspective of their existence, *Homo sapiens* have developed structures and behaviours that are conducive to genetic reproduction and ontogenetic survival of an individual of the species, whereas non-functional structures and behaviours have gradually disappeared [cf. Barrett, Dunbar, Lycett, 2002, pp. 22–44]. The egoism of genes is based on the assumption that an individual's source of action is genetic reproduction and distribution of one's own genes, which is possible through offspring but also through helping kin reproduction, based on a common genetic element [Dawkins, 1976]. Kin mechanisms of development result directly from the assumption of the egoism of genes, and explain the question of parental care and investment, and kin altruism. Non-kin reciprocal altruism is a functional effect, which assumes that cooperation and commitments made by individuals in a group, in the long term are conducive to their individual chances of survival and reproduction [Trivers, 1971].

Neoevolutionism has characteristics of a paradigm, as it proposes a coherent epistemology and methodology based on a theory that is highly verified and is used in many disciplines of science. However, in biology, the neoevolutionary theory is a dominant and verified concept that is based on a great number of scientific proofs; whereas in the social sciences neoevolutionism is one of many concepts for research on the human mind, culture and society, alongside functionalism, critical theory or interpretivism. Neoevolutionism in the social sciences has collected a certain amount of evidence confirming the validity of its epistemological and methodological assumptions. This was possible thanks to, on the one hand, the work of such researchers as W.D. Hamilton, R.L. Trivers, E.O. Wilson, S. Pinker, and J. Tooby and L. Cosmides, and on the other, to the fast development of mind examination techniques and the experimental social sciences. The research covers mainly human behaviours interpreted in the categories of the evolutionary developed mind, which makes it possible to predict and interpret behaviours related to social cooperation, sexual choices, parenthood, many aspects of perception and cognition, and differences between the sexes [Barrett, Dunbar, Lycett, 2002]. Apart from achievements in empirical research, neoevolutionism in the social sciences uses a theory that applies to the whole world of living organisms (neo-Darwinism).

According to M. Bradie, neoevolutionism in the social sciences realises two separate epistemological programmes [Bradie, 2004]. One examines the evolution of human cognitive mechanisms, and the other – the evolution of scientific theories. The evolution of cognitive mechanisms is an issue largely

under empirical research that analyses the functioning of the brain. The evolution of scientific theories is an epistemological and philosophical issue in which the theory of evolution is a source of analogies and metaphors rather than cause-effect explanations. Evolution, understood in such an indirect way, has been a source of inspiration in many social sciences [Laland, 2007]. For example, in economics and the management sciences, one can also differentiate two trends of evolutionary reflection. Behavioural economics deals with human economic behaviours, which are based on the evolutionary shaped cognitive system [Tversky, Kahneman, 1982], whereas evolutionary economics uses analogies of evolutionary development and mechanisms of the biological section for market analyses [Dopfer, 2001].

Paradigms in the social sciences

The classification of paradigms in the social sciences can be derived from the system proposed by G. Morgan and G. Burrell [Burrell, Morgan, 1979] (Table 2). The latter describes a paradigm as a socially rooted network of basic assumptions regarding the ontology and epistemology of management (the picture of reality, cognitive ideal, fundamental social value orientations) [cf. Morgan, 1983, p. 21], which is perceived by the community of researchers in an implicit or explicit way.

Table 2. Paradigms in the social sciences

Epistemological assumptions regarding scientific ideal	Preferred social value orientation	
	Regulation	Radical change
Objectivism	Functionalism	Radical structuralism
Subjectivism	Symbolic-interpretive paradigm	Postmodernism

Source: On the basis of G. Burrell, G. Morgan, *Sociological Paradigms and Organizational Analysis*, Heinemann, London, 1979.

The first paradigm is called functionalist, sometimes – neopositivist, social systems or the quantitative paradigm. Its cognitive model is the natural sciences. The paradigm combines the influence of the neopositivist philosophy and the social systems trend with the functionalism of sociology and cultural anthropology. The Vienna Circle heritage includes: the assumptions of verificationism and accumulation of knowledge, the search for a scientific method, the classification

of dependent and independent variables, the search for mathematical modelling, and quantificational methodology [Sułkowski, 2005].

In the management sciences, functionalism is a dominant cognitive structure. Most theories aim at the realisation of the neopositivist scientific ideal. Knowledge should be objective and universal. Trends most deeply rooted in this perspective are those directly related to economics, which are also related to the birth of the management sciences [cf. Martan, 2002]. Connections to economics are most visible in attempts to direct management development onto a path of “enterprise sciences” [Lichtarski, 1997, p. 10]. The social systems and functional vision of organisation is accompanied by the image of a resourceful man, close to the categories of *Homo economicus*. The quantitative methodology plays an important role in such sub-disciplines of management as managerial accounting, logistics and information management.

The symbolic-interpretive paradigm was created in opposition to functionalism. Its most crucial sources of inspiration are the social and humanistic sciences, such as sociology, psychology, the social sciences and cultural anthropology. An attempt to reconstruct the assumptions of the symbolic-interpretive paradigm in management leads to several points, including social constructivism, the cognitive role of language in the social reality and the relationship between cognitive activity and practice. These epistemological assumptions are realised in cognitive programmes based on the qualitative, “soft” methodology, which derives mainly from the humanistic sciences.

In the management sciences, many concepts related to organisational culture, human resource management, management and change management processes are based on the epistemological assumptions of the interpretive approach. Examples are the “establishment” theory by K. Weick, the concept of organisational culture by L. Smircich and the “power network” by J. Pfeffer and G.R. Salancik [Weick, 1979; Smircich, 1983, pp. 55-65; Pfeffer, Salancik, 1978]. The basis of interpretive epistemology is the assumption on the constructivist and conventional character of the social and organisational reality [Hatch, 2002, pp. 24, 56]. Organisational order does not exist objectively but is continuously maintained, reconstructed and modified by individuals and groups, working in and around the organisation. Organisation and management processes are created by groups in the processes of institutionalisation, legislation and internalisation, and are of a contractual character, i.e. based on a collective consensus [Berger, Luckmann, 1966]. Economic matters act on a par with political, social and psychological influences. A man within an organisation searches for meaning; he or she is value-oriented and involved in a research situation. The act of cognition is entangled in language, culturally relativised and symbolic. Research results are not objective, but only inter-subjectively communicable. One can notice that the focus is on the categories

of everyday life that cover a hermeneutic circle in the form of perception, interpretation, definition, verification of usability and action.

The radical structuralism paradigm is based on the assumption of the existence of an objective social reality, which is in need of fundamental reconstruction. Social truths are hidden in omnipresent micro- and macrostructures of power. The role of the social sciences is to discover hidden mechanisms of power, domination and social inequality, and to make changes to social awareness and reality. The radical structuralism paradigm is critical of the social status quo and the achievements of the social sciences. The role of a researcher is to acquaint himself with social mechanisms and, most of all, to change the social reality. The research methodology is of a qualitative nature and is based on commitment. The radical structuralism paradigm is also referred to as a critical trend in the social studies (critical studies) and is closely related to neo-Marxism.

The fundament of modern neo-Marxism is the Frankfurt School, represented by T.W. Adorno, M. Horkheimer, J. Habermas and H. Marcuse [Horkheimer, Adorno, 1994]. An important theoretician who described objectively interpreted mechanisms of inequality was P. Bourdieu, who used the term “symbolic violence” [Bourdieu, 1990]. In our times, S. Hall and S. Deetz continue this thinking in their critical approach towards the media and social communication [Deetz, 1995]. Another trend is neo-Marxist feminism, which describes the situation of women as a group culturally dominated by false awareness, identity manipulation and symbolic violence [Oakley, 2000]. Social neo-Marxism has been reborn as political criticism of modern democracy, the imperialism of developed countries and the processes of globalisation.

The trend of radical structuralism penetrates to the management sciences through the criticism of managerialism as a tool for domination and the ideology of power [Harding, 2003, p. 14]. This is related both to feminism and the criticism of the organisational power hierarchy, the media and social communication. For example, the management sciences, sociology, cultural anthropology and ethics literature includes anti-marketing publications, which raise the issue of the criticism of marketing as being both a science and a social practice of a manipulative and exploitative nature [Szmigin, Carrigan, 2003]. Some of the analyses indicate development paths for ethical marketing, based on the subjective treatment of customers and research participants [Bekin, 2004].

Postmodernism is the least homogenous approach. It is so incoherent that, actually, it is pointless to call it a paradigm. Common elements are subjectivism, cognitive relativism, programme incoherence and distrust of science. Postmodernists question the possibility of reaching an objective truth [Engholm, 2001; Boje, Jr Gephart, Thatchenkery, 1996; Welge, Holtbrugge, 1999, pp. 305–322; Burrell, Cooper, 1998, pp. 91–112]. The postmodernist trend indicates the

fall of the meta-narrative of the Enlightenment project (the fall of the myth of progress), based on an uncritical pursuit of rationality, which leads to the instrumentalisation of the mind against man. Most common motives used by the theory include fragmentation of identity, hyperreality, loss of cognitive bases and meta-narrative, the core meaning of discourse and language, and textualism (perception of reality through the prism of the metaphor of text) [Alvesson, Deetz, 2005].

The postmodernist approach began spreading in management at the turn of the 1980s, influenced by the concepts of network society and consumerism. Authors who have used the postmodernist approach in management include S. Brown [Brown, 1993, pp. 19–34], F. A. Firat, J. Clifford, I. Shultz [Firat, Fuat, Shultz, 1997, pp. 183–207; Firat, Fuat, Yenkaresh, 1993, pp. 227–249], A. Yenkaresh, M.B. Holbrook [Holbrook, 1995, pp. 128–163] and J. Oglivy [Oglivy, 1990, pp. 4–20].

Paradigm connections

Neoevolutionism in the social sciences is undoubtedly a proposal of a new paradigm. It is therefore worth answering the question: what are the connections of this cognitive perspective with other paradigms? Is neoevolutionism a radical departure from all the basic cognitive assumptions that characterise the various paradigms of the social sciences?

When looking for a social sciences paradigm that would be closest to neoevolutionism, one can point to functionalism. It originates from the epistemological assumptions of neopositivism, and therefore, itself assumes objectivism of cognition, realism and empiricism, verificationism and falsificationism, as the criteria of science. Functionalism seeks to improve the standard of scientific research through methods modelled on the natural sciences. The classic functionalist image of social institutions and human nature assumes the adaptive function of human behaviour and shares some features with neoevolutionism. Functionalism, however, does not take into account the assumption that the human brain, based on the coupling of the genes and environment, is accustomed to dealing with the core issues of the survival and reproduction of individuals from the distant past, and not from the present time. The “troglydote” brain has a range of mechanisms that are not functional from the point of view of the present time, e.g. a tendency to gorge on the most caloric products led to the survival of primates, whereas nowadays it is harmful. In accordance with the assumptions of neoevolutionism, most functionalists largely overestimate the role of culture in the formation of the social world and underestimate genetic conditions. There are also no explanations as to

the importance of reproduction, which from the point of view of the egoism of genes is the most crucial criterion, more important even than survival.

Indubitably, neoevolutionism differs significantly from the symbolic-interpretive paradigm, both on the epistemological and methodological level. Interpretivism assumes subjectivism or intersubjectivism of cognition, dualism and essentialism, and certain methodology based on hermeneutics and phenomenology. In addition to the obvious opposition of the two paradigms, one can also find slightly deeper similarities. The vision of man in interpretivism departs from the overly rationalised assumptions of *Homo economicus*, which are quite visible in functionalism. Man, entangled in the network of meaning and sense, which he himself creates, is based on complex emotional and intellectual motives and is not internally uniform [Geertz, 1973]. Interpretivism also considers the influence of psychoanalysis and the discovery of the subconscious. It seems that neoevolutionism is far from over-rationalising the image of the human mind, which stems from the questioning of the Cartesian tradition of the knowing subject. As part of its nature, *Homo sapiens* have natural instincts related to reproduction, survival, social life etc. However, the evolutionary redundancy of the human brain (exaptation [Nowak, 2007, p. 262]) leads to the creation of higher needs. Consequently, the brain connects various and sometimes contradictory needs and motives on different levels of the conscious and unconscious. Description of human behaviours cannot therefore overestimate the rational sphere and overlook cognitive illusions of not always functional emotions and instinctive actions.

Neoevolutionism is clearly contradictory to the radical structuralism paradigm. In accordance with the assumptions of neoevolutionism, the critical theory is not a theory in the scientific sense, but an ideology. The assumption about the involvement of the knowing subject in the process of change and the pursuit of the emancipation change, combined with the rejection of the neopositivist epistemology, are completely antagonistic to neoevolutionism. The only common element of the two paradigms seems to be the disillusioned vision of human nature and society.

Radical structuralism interprets the social world in egoistical categories. People seek power, property, control over resources, and fulfilment of their needs. Society and culture are extensions of these tendencies. Social institutions are oppressive, use symbolic violence or produce a false collective awareness, which equates to maintaining an unjust order. Disruption of the status quo is a revolutionary action, which requires the involvement of disadvantaged social groups. Similarly to radical structuralism, neoevolutionism suggests egoistical motives of individuals, which are limited by the social nature of man.

“Programming” by genes results in susceptibility to: idealisation of oneself, rationalisation of one’s negative actions, and nepotism. In neoevolutionism,

even altruism is not selfless. By saving one's relatives, they save their own genes; through cooperation with strangers, they increase their chances for survival and reproduction. By way of consolation, it can only be added that neither neoevolutionism nor the critical theory heads towards this egoistical determinism. Genetic "programming" is never complete and is just a tendency, not behavioural automatism. It is therefore possible to overcome biological pressure, which is proved by many people on a daily basis, e.g. when they decide to adopt children. Also the existence of the two paradigms is a proof of human emancipation from biological and political mechanisms.

There is a chasm between radical humanism, sometimes identified with postmodernism, and neoevolutionism. Postmodernism is subjectivist and relativist, and simultaneously sceptical towards science. Neoevolutionism, on the other hand, displays objectivist orientation, seeks generalisation and universalism in cognition, and has a great dose of trust for scientific institutions.

Summary

In opposition, the standard model of the social sciences versus neoevolutionism does not seem entirely true. In reality, although it proposes a radical change of cognitive perspective in the social sciences, neoevolutionism maintains a more complex interrelation with other paradigms of the social sciences. In terms of the philosophy of science, it refers mostly to neopositivism, although its vision of the human mind is far from the rationalism and empiricism of the Vienna Circle [Sułkowski, 2004, pp. 3–14]. From among the four paradigms of the social sciences, neoevolutionism seems closest to functionalism. Although most neoevolutionary assumptions do not comply with the symbolic-interpretive paradigm, there are some common areas, such as those related to the vision of *Homo sociologicus*, bounded rationality and the barriers to interpretation and cognitive illusions. Neoevolutionism is in clear opposition to subjectivist paradigms, by completely rejecting radical structuralism and humanism and postmodernist approaches that are based on radical epistemological relativism.

Neoevolutionism seems to be a very promising direction of research, which uses not only theory with various levels of detail, but also developed research methods. Cognitively valuable is its provision of important arguments supporting the monistic stand in epistemology, according to which the social reality and human mind can be examined by means of the same assumptions and similar methods as nature. In my opinion, however, too radical a stand in relation to other paradigms and theories is not necessary. Apart from the philosophical core and methods derived from the natural sciences, neoevolutionism also

uses ideas and methodology developed in the social sciences. A certain dose of epistemological pluralism that, clearly, does not involve radical cognitive relativists, should be therefore conducive to the development of the paradigm.

References:

- Alvesson, M., Deetz, S., 2005. Critical Theory and Postmodernism: Approaches to Organization Studies [in:] Grey, Ch., Willmott, H. (eds.). *Critical Management Studies. A Reader*. Oxford University Press: New York.
- Barkow, J. (ed.), 2006. *Missing the Revolution. Darwinism for Social Scientists*, Oxford University Press: Oxford.
- Barrett, L., Dunbar, R., Lycett, J., 2002. *Human Evolutionary Psychology*. Palgrave Macmillan: New York.
- Bekin, C., 2004. Research Ethics and Fieldwork at New Consumption Communities [in:] *4th International Critical Management Studies Conference*. Lancaster.
- Berger, P.L., Luckmann, T., 1966. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Doubleday: Garden City.
- Boje, D.M., Gephart Jr, R.P., Thatchenkery, T.J., 1996. *Postmodern Management and Organization Theory*. Sage Publications: Thousand Oaks.
- Bourdieu, P., 1990. Animaadversiones in Mertonem [in:] Clark, J., Modgil, C., Modgil, S. (eds.). *Robert K. Merton: Consensus and Controversy*. The Falmer Press: London-New York.
- Bradie, M., 2004. Naturalism and Evolutionary Epistemologies [in:] Niiniluoto, I., Sintonen, M., Woleński, J., *Handbook of epistemology*. Kluwer Academic Publisher: Dordrecht.
- Brown, S., 1993. Postmodern Marketing, *European Journal of Marketing*. No. 27 (4), pp. 19–34.
- Burrell, G., Cooper, R., 1998. Modernism, Postmodernism and Organizational Analysis: An Introduction, *Organization Studies*. Vol. 9, no. 1, pp. 91–112.
- Burrell, G., Morgan, G., 1979. *Sociological Paradigms and Organizational Analysis*. Heinemann: London.
- Buss, D.M., 2008. *Evolutionary Psychology. The New Science of the Mind*. Pearson: Boston.
- Dawkins, R., 1976. *The Selfish Gene*. Oxford University Press: Oxford.
- Deetz, S., 1995. *Transforming Communication, Transforming Business: Building Responsive and Responsible Workplaces*. Cresskill: Hapton.
- Dopfer, K., 2001. *Evolutionary Economics. Program and Scope*. Kluwer Academic Publishers: Boston.
- Engholm, P., 2001. *The Controversy Between Modernist and Postmodernist Views of Management Science: Is a Synergy Possible?*. Internet. Monash University. May.

- Espina, A., 2005. El darwinismo social: de Spencer a Bagehot. *Reis*. No. 110. Internet edition, pp. 175–187.
- Feyerabend, P., 1996. *Przeciw metodzie*. Siedmioróg: Wrocław.
- Firat, A., Fuat, A., Shultz, C.J., 1997. From Segmentation to Fragmentation: Markets and Market Strategy in the Postmodern Era, *European Journal of Marketing*. No. 31 (3/4), pp. 183–207
- Firat, A., Fuat, A., Yenkaresh, A., 1993. Postmodernity: The age of marketing, *International Journal of Research in Marketing*. No. 10, pp. 227–249.
- Geertz, C., 1973. *The Interpretation of Cultures*. Basic Books: New York.
- Hamilton, W.D., 1964. The Genetical Evolution of Social Behaviour. *Journal of Theoretical Biology*. No. 7, pp. 1–52.
- Harding, N., 2003. *The Social Construction of Management*. Routledge: London.
- Hatch, M.J., 2002. *Teoria organizacji*. Wydawnictwo Naukowe PWN: Warsaw.
- Holbrook, B.M., 1995. The Three Faces of Elitism: Postmodernism, Political Correctness and Popular Culture, *Journal of Macromarketing*. No. 15 (Fall), pp. 128–163.
- Horkheimer, M., Adorno, T.W., 1994. *Dialektyka oświecenia*. IFiS PAN: Warsaw.
- Kuhn, T.S., 2001. *Struktura rewolucji naukowych*. Aletheia: Warsaw.
- Laland, K.N., 2007. Niche construction, Human Behavioral Ecology and Evolutionary Psychology [in:] Dunbar, R.I.M., Barrett, L., *Evolutionary Psychology*. Oxford University Press: New York.
- Lichtarski, J. (ed.), 1997. *Podstawy nauki o przedsiębiorstwie*, Wydawnictwo Akademii Ekonomicznej: Wrocław.
- Mameli, M., 2007. Evolution and psychology in philosophical perspective [in:] R.I.M., Dunbar, L., Barrett. *Evolutionary Psychology*. Oxford University Press: New York.
- Martan, L., 2002. Rozważania o nauce o kierowaniu organizacjami. *Organizacja i Kierowanie*. No. 2 (108).
- Morgan, G., 1983. *Beyond Method. Strategies for Social Research*. Sage Publications: London, p. 20.
- Morgan, G., 1983. *Beyond Method. Strategies for Social Research*. Sage Publications: London.
- Nowak, S., 2007. *Metodologia badań społecznych*. Wydawnictwo Naukowe PWN: Warsaw.
- Oakley, A., 2000. *Experiments in Knowing. Gender and Method in the Social Sciences*. The New Press: New York.
- Oglivly, J., 1990. The Postmodern Business, *Marketing and Research Today*. No. 18 (1), pp. 4–20.
- Parsons, T., 1966, *Societies: Evolutionary and Comparative Perspective*. Prentice-Hall: New

Jersey.

- Pfeffer, J. Salancik, G.R., 1978. *The External Control of Organisations: a Resources Dependence Perspective*. Harper and Row: New York.
- Pinker, S., 2005. *Tabula rasa, Spory o naturę ludzką*. GWP: Gdańsk.
- Popper, K., 2002. *Logika odkrycia naukowego*, PWN: Warsaw.
- Smircich, L., 1983. Organisations as Shared Meaning [in:] *Organisation Symbolism*, JAI Press: Greenwich.
- Sułkowski, Ł., 2004. Neopozytywistyczna mitologia w nauce o zarządzaniu, *Organizacja i Kierowanie*. No. 1 (115), pp. 3–14.
- Sułkowski, Ł., 2005. *Epistemologia w naukach o zarządzaniu*. PWE: Warsaw, pp. 51–54.
- Szmigin, I., Carrigan, M., 2003. New Consumption Communities: Resisting the Hegemony of the Marketing Process [in:] *3rd International Critical Management Studies Conference*. Lancaster.
- Tooby, J., Cosmides, L., 2000. Toward Mapping the Evolved Functional Organization of Mind and Brain [in:] Gazzaniga, M., (ed.). *The New Cognitive Neuroscience*. MIT Press: Cambridge Mass, pp. 1167–1178.
- Trivers, R.L., 1971. The Evolution of Reciprocal Altruism. *Quarterly Review of Biology*. No. 46, pp. 35–57.
- Tversky, A., Kahneman, D., 1982. Availability: A Heuristics for Judging Frequency and Probability [in:] Kahneman, D., Slovic, P., Tversky, A., (eds.), *Judgment Under Uncertainty: Heuristics and Biases*. Cambridge University Press: New York.
- Weick, K., 1979. *The Social Psychology of Organising*. Addison-Wesley. Reading Mass.
- Welge, M.K., Holtbrugge, D., 1999. International Management Under Postmodern Conditions, *Management International Review*. Vol. 39, no. 4, pp. 305–322.
- Wilson, E.O., 2001. *Socjobiologia*. Zysk i S-ka: Poznań.