

Tuukka Kaidesoja

Studies on Ontological and
Methodological Foundations
of Critical Realism
in the Social Sciences



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ABSTRACT

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Finnish summary

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This study analyses and evaluates the ontological and methodological foundations of the critical realist tradition in the social sciences. It is argued that the Kantian transcendental arguments used by Roy Bhaskar and some other critical realists in the justification of the critical realist ontology are problematic. The study indicates that critical realists fail to demonstrate how it is possible to acquire knowledge of the structure of reality, which is thought to exist independently of human knowledge and/or activities, by means of using *a priori* forms of argumentation. The concepts of causal power, emergence and social structure, which are all fundamental to critical realist social ontology, are also examined and evaluated. It is argued that these concepts are used ambiguously in Bhaskar's early works and that their uses in the context of social ontology contain certain problematic presuppositions.

In addition to critical evaluation of certain critical realist arguments and positions, this work seeks to develop scientifically realist and emergent materialist alternatives to the arguments and doctrines criticized. It is contended that a naturalistic method of argumentation in the context of ontology avoids the problems associated with the employment of Kantian transcendental arguments by critical realists. Furthermore, the non-transcendental and moderately non-essentialist interpretation of the concept of causal power is outlined and contrasted with Bhaskar's essentialist and transcendental version of this concept. It is also argued that causal relations may not be open to single ontological definition. A systemic interpretation of the concepts of social system and social structure, which is largely based on Mario Bunge's works, is provided as an alternative to the critical realist "depth-relational" social ontology. It is argued that a combination of Bunge's systemic social ontology and William Wimsatt's gradual notion of emergence provides a promising alternative to Bhaskar's ambiguous concept of social emergence.

Keywords: Bhaskar, Bunge, causal power, critical realism, emergence, scientific realism, social ontology, social structure, social system, transcendental argument

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- I. The Trouble with Transcendental Arguments: Towards a Naturalization of Roy Bhaskar's Early Realist Ontology. *Journal of Critical Realism*, 4(1), 2005. p. 28-61.
- II. How useful are Transcendental Arguments for Critical Realist Ontology? A Response to Morgan. *Journal of Critical Realism*, 5(2), 2006. p. 344-353.
- III. Exploring the Concept of Causal Power in a Critical Realist Tradition. *Journal for the Theory of Social Behaviour*, 37(1), 2007. p. 63-87.
- IV. Bhaskar and Bunge on Social Emergence. *Journal for the Theory of Social Behaviour* 39(2), 2009. p. 300-322.
- V. The Concept of Social Structure in Roy Bhaskar's Critical Realism. *Sociologia*, 44(2), 2007. p. 79-94. Translated with slight modifications by Tuukka Kaidesoja.

1 INTRODUCTION

1.1 Perspective of the study

Do objects of social scientific research exist independently of social scientists' representations of them? Is it possible to acquire knowledge of objects that exist independently of social scientists' representations of them? Proponents of ontological and epistemological scientific realism in the philosophy and methodology of the social sciences seek to provide affirmative answers to both of these questions. They also aim to identify the best methods of acquiring social scientific knowledge about objects that exist independently of social scientists' representations of them. Scientific realism is not, however, a unified doctrine, since philosophers of science have defended many varieties of realism in different areas of philosophy and methodology (Niiniluoto 1999, Mäki 2005). Social scientific realism also comes in multiple forms (Mäki 1990).

This study focuses on one specific variety of scientific realism, nowadays commonly referred to in the context of philosophy and methodology of the social sciences as critical realism. This particular tradition is predominantly ascribed to British philosopher Roy Bhaskar and his adherents, although Rom Harré's realist philosophy of science also played a vital role in the formation of this tradition. Moreover, the term 'critical realism' was not initially used by Bhaskar at all, but was later coined by people influenced by his doctrines of critical naturalism and transcendental realism. Eventually Bhaskar (1989, vii) also adopted the term. In the following, the term 'critical realism' refers to the Bhaskarian variety of scientific realism unless stated otherwise. The specific content of this position and its relation to other philosophies and methodologies of social science are examined later in this introduction.

It is worth noting that other philosophers, such as Roy Wood Sellars, C.D. Broad, Maurice Mandelbaum and Ilkka Niiniluoto, have also used the term 'critical realism' in characterizing their general philosophical positions (Niiniluoto 1999, Hartwig 2007, 97-99). In philosophical dictionaries the term 'critical realism' is traditionally defined as a position in the philosophy of

perception which opposes both idealism and direct or naïve realism. It would be an interesting task to investigate the connections between these critical realist positions and Bhaskarian critical realism, but this theme will not be systematically examined in this work. I will study, instead, Bhaskarian critical realism, mainly as a position in social ontology and methodology of the social sciences. It can be also said that some of the themes discussed in this study belong to the field of social theory. I nevertheless conceive social ontology and social theory as being partially overlapping fields of inquiry.

During the past three decades many philosophers and social scientists have developed Bhaskar's ideas further in the contexts of the philosophy and methodology of the social sciences. An ever-growing number of social scientists have also applied critical realism as a meta-theory in their theoretical and empirical studies. Furthermore, critical realists have established their own journal (*Journal of Critical Realism*), two book series (*Routledge Studies in Critical Realism* and *Critical Realism: Interventions*), and two organizations (the Centre for Critical Realism and the International Association for Critical Realism). For these reasons, it can be said that critical realism has recently gained a relatively strong foothold in the social sciences, in Great Britain in particular, but also elsewhere in the English-speaking world and Scandinavia.

Critical realism is commonly described as a movement in the philosophy and methodology of the social and other human sciences (Bhaskar 1998, ix; Hartwig 2007, 96). In my view this is quite a precise characterization since, in addition to purely scientific aims, critical realists also commonly uphold broader political and ethical aspirations. Furthermore, many critical realists hold that one of the most important goals of their philosophical and scientific studies is to promote human emancipation. Human emancipation, in turn, is conceived explicitly in Marxist terms by many of the leading critical realists, such as Bhaskar (1989) and Andrew Collier (1994). It seems to me, however, that no particular political program can be derived directly from the abstract ontological and methodological assumptions of critical realism. Critical realists have also keenly built both international and local organizations whose aim is to promote critical realism among social scientists and to provide forums for those already initiated into critical realism. In these respects, critical realism has something in common with postmodernist and social constructionist movements in the social sciences, even though their ontological and epistemological views differ significantly.

It is often noted that Bhaskar's first two books, *A Realist Theory of Science* and *The Possibility of Naturalism*, have acquired a kind of canonical status within critical realist tradition, since they are still frequently conceived as providing the philosophical foundations of the critical realist position and seldom criticized in the texts written by critical realists (Patomäki 2009). It can perhaps also be said that Bhaskar has become something of a charismatic leader of the critical realist movement, although the dialectical and spiritual turns in his later philosophy have not been accepted by all critical realists. Especially in these later works, Bhaskar (1993, 2002) has – alongside some other critical

realists – constructed a huge number of neologisms and abbreviations (for an account of Bhaskar's terminology see Hartwig 2007) which seem to function as a barrier of communication between those already initiated into the critical realist canon and those who remain outsiders. Moreover, Bhaskar's (2000) recent spiritual bent does not seem to be entirely compatible with his earlier philosophy of science. These later developments in Bhaskar's thinking remain, however, minority views within the critical realist movement and will not be considered here. These features of critical realism are unfortunate insofar as they hinder critical discussion on the philosophical and methodological foundations of this position. I nevertheless hope that they do not conceal the fact that Bhaskar and other critical realists have put forth many important ontological, epistemological and methodological views that are worth investigating.

Even though critical realism has gained proponents mostly in the social sciences, Bhaskar first developed his realist philosophy of science in the context of the philosophy of natural science and then applied it to the social sciences. This pattern of development seems to be quite common, since it can be argued that many traditional philosophies of the social sciences either seek to apply a philosophy of natural science to social sciences (e.g. logical positivism, Popperian falsificationism and scientific realism) or were developed in opposition to social scientific applications of some philosophy of natural science (e.g. the hermeneutic tradition, which opposes social scientific applications of the positivist philosophy of natural science). Critical realists have, however, striven to take into account the ontological differences between the objects of natural and social sciences when developing their own version of realist philosophy and methodology of the social sciences. Following Bhaskar (1979), critical realists commonly hold that the ontological differences between the objects of the natural and social sciences also imply that the particular methods of these sciences should be significantly different, though in general terms both the natural and social sciences aim at providing causal explanations in terms of causal mechanisms.

Critical realists frequently emphasize that critical realism should be conceived not only as a philosophy of the social sciences but also as a philosophy for the social sciences, since one of the aims of critical realist philosophy and methodology is to advance social scientific research by presenting methodological prescriptions and models that can be employed in social scientific research (e.g. Sayer 2000, 32). It seems to me, however, that critical realism has turned out to be a disappointment to many practicing social scientists engaged mainly in empirical inquiry, since critical realists have invented very few, if any, new methods of empirical social research. This is not to deny that some critical realists have sought to develop a critical realist methodology of the social sciences at a more concrete level, by means of combining abstract critical realist social ontology and methodological principles to certain social scientific methods that are currently used in empirical social scientific research (Sayer 1992, Danermark et. al. 2002; Joseph & Roberts 2003). Their examples of critical realist empirical social studies are nevertheless few

and many of their most detailed examples are rather critical realist re-interpretations of such empirical studies, which do not initially employ a critical realist perspective at all. Given that specifically critical realist empirical studies have been rather rare in the social sciences, it can be argued that it is not entirely clear how Bhaskar's abstract ontological and methodological ideas should be employed in the context of empirical social research. One motivation behind the present study is to point out that critical realist ontology and methodology contain certain conceptual ambiguities, simplifications and problems, which might explain why they are so difficult to apply in empirical research. I also seek to develop some alternative scientifically realist views which may prove more fruitful regarding empirical research than those promoted by Bhaskar.

From the theoretical perspective, critical realism can be seen as a combination of certain philosophical, methodological and social theoretical positions, which are analyzed more carefully in the subsequent sections of this introduction. As is well known, these kinds of positions typically develop in relation to each other due to the fact that philosophers, methodologists and social theorists commonly argue for their positions by criticizing competing positions in their fields. Critical realism is no exception, since its identity is largely determined by its relationship to other positions. Hence, one of the aims of this introduction is to provide a rough positioning of critical realism in the field of philosophical, methodological and social theoretical traditions in the social sciences. The positioning presented here is nevertheless far from complete, since, for example, traditions of neo-functionalism and analytical sociology are not considered at all. One reason for omitting these two important sociological traditions is that interaction between them and the critical realist movement has so far been almost non-existent. I hope that, notwithstanding its omissions, the following positioning helps to contextualize critical realism.

As Marxist sociologists and traditional sociologists of knowledge commonly emphasize, philosophies and scientific theories have their roots in the societies and historical situations from which they emerge. From this perspective, social sciences are thought to be more or less prone to the so-called social determination of beliefs and theories. Social scientists are, for example, attributed with promoting the class-specific interests of the bourgeoisie, proletariat or other social group by developing social theories and conducting empirical studies, although it is usually admitted that this process may not occur consciously. Moreover, as Karl Mannheim (1976) pointed out, social scientific concepts and theories are not only formed in ongoing socio-political processes, but also used as resources for orientation and collective action in prevailing socio-political situation. Social scientific knowledge, in turn, can function both as an ideology, when it legitimates the status quo, and as a utopia, when it promotes collective action aimed at changing the current social reality. From this perspective, it can be argued that the philosophies and methodologies of the social sciences might also be best studied as social or intellectual movements, insofar as they are produced to promote certain

political or professional interests. Consequently, the content of these philosophies and methodologies is best explained by relating them to the social positions (and interests) of their authors and the wider social structure.

This perspective is not investigated in this study. Instead of studying it as a social or intellectual movement within the wider socio-political context, critical realism will be analyzed and evaluated primarily from the philosophical and theoretical point of view, which is thought to be at least partially autonomous from the wider socio-political context. Questions regarding the role of political interests and ethical values in the development and diffusion of the philosophies and methodologies of the social sciences are not systematically studied here either, although it is readily admitted that philosophical and scientific work is always conducted from within certain social conditions. Since these are sociologically important issues, they will be discussed here further.

Notwithstanding that it would be an interesting topic to study the socio-political roots of the critical realist philosophy and methodology of the social sciences, this would require a rather different piece of work. In this study I seek, by contrast, to analyze and evaluate critical realism mainly as a social ontology and methodology of the social sciences and pay only minor attention to its socio-historical roots and political affinities. For this reason, the methods used in this study, such as conceptual and argument analysis, are also largely philosophical or theoretical in nature. The criteria used in evaluation of critical realist doctrines are, accordingly, primarily philosophical and scientific, not moral or political. It is also my contention that the development of philosophies of science and scientific theories cannot be reduced to general socio-political development in the sense that it would be possible to show that they are direct causal consequences of the social positions of their proponents or prevailing relations of power. This kind of sociologically reductionist view is also rejected by Mannheim (1976) and by more recent sociologists of scientific knowledge (e.g. Barnes et. al. 1996).

I nevertheless admit that the philosophies and methodologies of the social sciences are always more or less influenced by general socio-historical developments and that they might serve ideological and utopian functions in certain socio-historical contexts. I want to emphasize here, however, that in addition to general socio-political determinants, there are also other kinds of determinants that participate in the production of philosophies and methodologies of the social sciences, such as the non-socio-political environment, universal physiological and psychological features of human beings, specific developments in different sciences and, perhaps most importantly, the specific internal dynamics of philosophical and methodological discussions. My intention is therefore not to deny the significance of sociological studies of the philosophies and methodologies of the social sciences as these, in addition to being highly interesting and informative, also seem to be largely compatible with the position of scientific realism as it is understood here. What I aim to question is the version of sociological determinism which seeks to explain the content of philosophies and methodologies by referring

solely to general socio-political contexts (or discourses) and which denies the significance of more philosophically and methodologically oriented studies of the philosophies and methodologies of the social sciences. I return to this issue in the final section of this introduction.

1.2 Aims and structure of the study

In this study I analyze and evaluate some of the basic ontological and methodological doctrines, assumptions and arguments of the tradition of critical realism in the social sciences. I regard Roy Bhaskar's early texts as the most important works in the development of the critical realist tradition and, hence, they are investigated and evaluated here in detail. I also consider some of the views of the other leading critical realists, such as Andrew Sayer (1992, 2000), Andrew Collier (1994), Margaret Archer (1995, 2000), Tony Lawson (1996, 2003), Peter Manicas (2006) and Dave Elder-Vass (2005, 2007a). The dialectical and spiritual turns in Bhaskar's (1993, 2000) philosophy are not, however, investigated in this study due to the fact that these remain controversial even among his fellow critical realists and their implications for empirical social scientific research are unclear. Bhaskar's (2002) new philosophy of meta-reality is also omitted here, since it is regarded as largely irrelevant with respect to the topics dealt with in this study.

The study is divided into an introductory section and five articles. In the introductory section, I aim to provide relevant background information for the five articles. In addition to a general overview of critical realism, the introduction also provides a summary of the main content of the articles. I also strive in the introduction to highlight some of the interconnections between some of the issues dealt with in the articles and to situate them within the wider discussion. The articles cover the following topics:

- An analysis and criticism of Bhaskar's method of transcendental argumentation, which Bhaskar employs in his justification of transcendental (or critical) realist ontology (I & II)
- An analysis of the critical realist concept of causal power and a criticism of its uses in the context of critical realist social ontology and methodology of the social sciences. (III)
- An analysis of Bhaskar's concept of emergence and a criticism of its uses in the context of critical realist social ontology (IV).
- An analysis and criticism of Bhaskar's "depth-relational" concept of social structure and its methodological consequences (V)

Since these articles all deal with fundamental issues in critical realist social ontology and methodology of the social sciences, it can be said that this study

seeks to analyze and evaluate the *ontological and methodological foundations of critical realism in the social sciences*.

I wish to emphasize here, that this study does not consist solely of negative criticism of the doctrines and concepts put forth within the tradition of critical realism. The following articles seek to explore and develop alternatives to the critical realist arguments and the doctrines criticized by them. The first and second articles argue, for example, that the naturalistic method of argumentation in ontology avoids the problems associated with the Kantian method of transcendental argumentation employed in the works of Bhaskar and some of his adherents. The third article argues, for example, that the concept of causal power should be analyzed from a moderately anti-essentialist perspective, since a strictly essentialist concept of causal power cannot be plausibly employed outside physics and chemistry. It also sets out to show that this kind of moderately anti-essentialist concept of causal power might be utilized in analyzing causal properties of concrete social systems, such as groups and organizations, even though it cannot be plausibly applied to abstract social structures. Furthermore, it is suggested that, due to the multiple uses of causal terms in scientific research, the concept of causality might not be susceptible to a single ontological definition. The fourth article analyzes the concept of social emergence from a compositional and gradual perspective by employing William Wimsatt's (2007) ideas. This account of emergence is at least partially incompatible with the uses of this concept in critical realist social ontology. The fourth and the fifth article also seek to show that Mario Bunge's (1996, 1998) systemic social ontology is in certain respects superior to Bhaskar's critical realist social ontology and that Bunge's systemic social ontology can be combined with Wimsatt's gradual concept of emergence. The fourth article also argues that this combination can, in turn, be fruitfully applied in theoretical and empirical studies of the emergent properties of different kinds of social systems. Admittedly, many of these views and suggestions are tentative and more work has to be done in order to develop them further. At the very least, I hope to have identified some potentially fruitful investigations for when critical realist social ontology and methodology is further elaborated.

As I have already indicated, in developing the above arguments and views, works by other realist philosophers of science are deployed, particularly those of Mario Bunge and William Wimsatt. It can be stated, therefore, that one of the aims of this study is to build bridges between the tradition of critical realism and other realist philosophies of science. I consider this to be a key objective for the further development of critical realism, since the relationship between critical realism and recent philosophies of science has so far remained rather weak (Kuorikoski & Ylikoski 2006). In my view, increased communication between critical realists and other philosophers and methodologists of the social sciences would benefit not only critical realism but also these other traditions. Hence, this study seeks to link some of the doctrines of critical realism to recent discussions within the analytic and naturalistic philosophy of science.

Finally, I want to emphasize here that, even though criticisms presented might seem occasionally harsh, this study nevertheless aims to develop the critical realist tradition further, since, notwithstanding the criticisms presented, many of the basic views of critical realism are accepted here. Positions in social ontology and methodology of the social sciences that I strive to defend here are varieties of scientific realism and emergent materialism, even though they differ from Bhaskar's versions of these doctrines. I also largely endorse critical realist critiques of postmodernism and strong varieties of social constructionism (Bhaskar 1991; Sayer 2000; López & Potter 2001; Fleetwood 2005). I will return to some of these critiques later in this introduction.

1.3 Background and nature of critical realism

The tradition of critical realism emerged in Great Britain in the 1970's. British philosopher Roy Bhaskar is widely credited as being the founding father of this tradition, and as was already indicated, his first two books in particular, *A Realist Theory of Science* (RTS) and *The Possibility of Naturalism* (PN), have been and continue to be important sources for other advocates of critical realism in the social sciences, frequently cited and discussed in texts written by critical realists. In this chapter, I will describe and analyze the basic views in these two books and outline some of their antecedents and parallels. In a sense, this study also continues to promote the dominant position of these two books in the critical realist tradition, although many of their views are criticized rather than celebrated.

Bhaskar's strategy in building his philosophy of science was to lay a foundation of a post-positivist philosophy of natural science, and to develop over this a realist philosophy of the social sciences. He conceived this route via philosophy of natural science to the philosophy and methodology of the social sciences as necessary due to the fact that positivism was then the dominant philosophy of the social sciences and that most critiques of social scientific positivism, such as those presented in the hermeneutical tradition, were still implicitly committed to a positivist account of natural science (Bhaskar 1979, 22-28, 169). In PN he argues that those critiques are problematic, since they amount to adopting such an anti-naturalist position in the philosophy and methodology of the social sciences, that it separates the social sciences strictly from the natural sciences and tends to reduce social reality exhaustively into concepts, meanings or language (ibid. 157, 169-179). Moreover, Bhaskar (ibid. 25-28) criticizes certain advocates of the hermeneutical tradition for their alleged commitment to empirical realist ontology at the level of meanings in the sense that they conceived agents' own concepts and meanings as incorrigible and left no room for the concept of ideology.

In RTS Bhaskar develops a transcendental realist philosophy of natural science and argues that in order to avoid the intractable problems associated

with empiricist (or positivist) and transcendental idealist philosophies of natural science, ontological questions should be vindicated in the philosophy of science. He also states that ontology should be separated strictly from epistemology in order to avoid so-called epistemic fallacies in which statements about being are “transposed into statements about our knowledge of being” (Bhaskar 1978, 16). Hence, it can be argued that Bhaskar’s main goal in RTS was to build a transcendental realist ontology, which, according to his transcendental argument, is a necessary condition of the intelligibility (or possibility) of certain natural scientific practices such as experimentation. Bhaskar (ibid. 8-9) nevertheless admits that RTS forms a part of the wider critical movement within the analytic philosophy of science which aims to rebut “the positivist account of science”, and contends that the other critiques of positivism have so far been largely epistemological in nature and have therefore remained ontologically underdeveloped.

Bhaskar conceives scientific research as a work process in which new facts, models, theories, methods, techniques and instruments are socially produced out of the existing ones. He uses the term ‘*transitive object*’ in referring to all of the available socially produced resources which are used by scientists in their research practices. The term ‘*intransitive object*’ refers, in turn, to things (including their structures and mechanisms), which exist independently of scientific knowledge and inquiry. Hence, scientific knowledge can be seen as a product of scientists’ social activities in which they use socially produced transitive objects in seeking to develop new representations of intransitive objects. This view of the nature of scientific development is epistemologically realist, since without intransitive objects, which exist independently of transitive objects, there would not be scientific knowledge. It also emphasizes the social and material dimensions of scientific research, which were previously seldom taken into account by analytic philosophers of science. (ibid. 21-24.)

According to Bhaskar’s (ibid. 25) own characterization:

[Transcendental realist philosophy of science] regards the [intransitive - T.K.] objects of knowledge as the structures and mechanisms that generate phenomena; and the knowledge as produced in the social activity of science. These objects are neither phenomena (empiricism) nor human constructs imposed upon phenomena (idealism), but real structures which endure and operate independently of our knowledge, our experience and the conditions which allow us to access them. [...] On this conception a constant conjunction of events is no more a necessary than it is sufficient condition for the assumption of the operation of a causal law.

Structures or rather structured things, such as molecules, atoms, chemical substances and living organisms, possess causal powers by virtue of which they are able to generate empirically observable effects. For example water has the power to put out fires, to freeze at 0 C° and to dissolve many chemical substances by virtue of its chemical structure. Bhaskar therefore conceives material things as active agents, even though he also stresses that the actions of non-living things should not be conceived as intentional. In addition to causal powers, things also possess liabilities by virtue of which they tend to suffer in certain ways when being affected by other things. The concept of mechanism, in

turn, refers to the workings of things (or structures) in situations in which their powers are exercised. Bhaskar emphasizes, however, that insofar as the thing's structure remains unchanged, its causal powers continue to exist as causal potentials, even though they are not currently exercised. He also argues that the effects of a certain mechanism (or tendency) may remain unrealized at the level of actual events, if its manifestation is inhibited by countervailing mechanisms.

Bhaskar goes on to introduce a distinction between 'closed' and 'open' systems. Closed systems can be characterized as situations in which a certain mechanism operates in an undisturbed way and produces empirically observable regularities. He states that these kinds of closed systems do not, with few exceptions, exist outside laboratories. It follows that most closed systems are built by scientists conducting experiments. In other words, scientists act as causal agents in experimental situations. Experimenting scientists, Bhaskar argues, must perform two functions in order to conduct experiments successfully: (i) they have to trigger the mechanism under study in such a way that it is active during the experiment and (ii) they have to prevent interference from other mechanisms. If both these conditions are met, then the effects of the mechanism under study can be observed or recorded by scientists. Experiments are crucial for the empirical testing of such hypothetical law-statements or models, which refer to postulated unperceivable mechanisms, since experiments provide situations in which scientists' predictions can be confirmed or falsified. Bhaskar nevertheless admits that empirical testing is never a clear-cut operation in science. (ibid. 33-34, 53-55.)

Structured things and their causal powers also endure and operate outside closed experimental conditions. Outside laboratories, mechanisms operate in open systems, where many mechanisms act simultaneously and interfere with the workings of each other. For this reason, in open systemic conditions "no constant conjunction of regular sequence of events is forthcoming" (ibid. 33). In other words, open systems are almost by definition systems where constant conjunctions of events (or empirical regularities) do not exist. To anticipate later discussions, it should be emphasized here that the social sciences, according to Bhaskar's (1979, 57) early view, always study such open systems, which cannot ever be experimentally closed. It follows from this that the "criteria for the rational development and replacement of theories in social science must be *explanatory and non-predictive*" (ibid. 1979, 58). It is also worth noting here that the strict distinction between open and closed systems has met serious criticisms (Kemp & Holmwood 2003, Töttö 2004, 269-276), which are considered in the fifth article of this paper. Bhaskar (1998, xv) has recently accepted a more gradual version of this distinction. He also cites approvingly the concept of *demi-regularity*, which was introduced by Tony Lawson (1997). This concept refers to imperfect and regionally restricted empirical regularities which are common in social reality. Despite these developments, the distinction between closed and open systems is still occasionally presented as an absolute dichotomy in critical realist literature.

Bhaskar's argument continues as follows: since natural scientific law-statements, such as Coulomb's or Gay-Lussac's laws, are generally held to apply not only in laboratories but also in open conditions outside laboratories, they cannot, in contrast to empirical realism, be analyzed in terms of empirical regularities or constant conjunctions of events. In order to secure their applicability in open systems, Bhaskar argues, law-statements should be "interpreted in a non-empirical (trans-factual) way, i.e. designating the activity of generative mechanisms and structures independently of any particular sequence or pattern of events" (ibid. 14). Hence, generative mechanisms and structures must be conceived as ontologically distinct from the events they produce (ibid. 13-14, 33). The concept of generative mechanism nevertheless is not a fundamental ontological concept in Bhaskar's transcendental realist ontology, since he writes that "a generative mechanism is nothing other than a way of acting of a thing" (ibid. 51). He conceives, in turn, actions of things in terms of their unperceivable causal powers and tendencies, which they possess by virtue of their essential intrinsic structures (ibid. 51, 87-88, 173-174).

Bhaskar describes the relationship between the structure of a thing and its powers by using the concept of natural necessity. The concept of natural necessity, which is rejected by empiricists and transcendental idealists, is also utilized in his characterizations of both causal laws and sequences of such events, which are connected by a particular generative mechanism (or causal law). In this latter sense, the concept of natural necessity can be employed in separating causal relations ontologically from accidental relations between events, since accidental relations between events are not connected by any causal mechanism while causal relations are always mediated by some generative mechanism (ibid. 158, 165, 171). As Pertti Töttö (2004, 269-272) has pointed out, Bhaskar does not, however, clearly separate the ontological definition of the concept of causal relation from the methodological criteria that can be used in identifying causal relations. The failure to make this distinction prevents Bhaskar from providing a clear answer to the question as to how causal hypotheses can be empirically evaluated in the social sciences, which study open systems and which cannot utilize scientific experiments. This issue is discussed further in the third and fourth articles of this paper.

The two interconnected aims of natural science, Bhaskar argues, are to discover what kind of things exist in reality and how they behave. The first aim is achieved by constructing real definitions of things, such as 'water is H₂O', which include knowledge of natural kinds and essential natures of things. The second aim is accomplished by means of presenting statements about causal laws, which refer to naturally necessary actions or behaviors of things. In critical realist ontology, things are also conceived as stratified in the sense that it is always possible – at least in principle – to study "deeper-level" structures and mechanisms of things, which in turn explain their more superficial properties and actions. For example, the chemical reactions of certain substances, such as water and table salt, can be explained in terms of atomic theory, the theory of valency and the theory of chemical bonding. The deeper level properties and

structures of atoms and molecules designated in these theories might be, in turn, explained by theories of quantum mechanics. (Bhaskar 1978, 168-171.)

Hence, one of the fundamental ontological views in Bhaskar's critical realism is that things studied in the natural sciences possess by natural necessity certain non-empirical and unperceivable causal powers, liabilities and tendencies (i.e. active causal powers) in virtue of their essential structures. This view is further examined and criticized in the third and fourth article. I will also argue in the following articles that some of the ambiguities and problems in critical realist social ontology are due to Bhaskar's transportation of many of the ontological assumptions of his natural scientific thing-ontology to his "depth-relational" social scientific ontology. It can be also noted here that Brian Ellis (2001) has recently defended a rather similar ontology to that developed in RTS. Ellis (ibid. 178) nevertheless restricts the application of the concepts of natural kind, essence, causal power and causal law to the objects of physics and chemistry and holds that objects of social sciences do not comprise natural kinds with shared essences and causal powers.

In addition to expounding his transcendental realist ontology, Bhaskar also presents some schematic views of the process of explanation in open systems (ibid. 125). These views are later systemized into the so-called RRRE-model of explanation. According to this model, explanations in open systems are accomplished in the following phases:

- (1) *Resolution* of a complex event into its component causes (causal analysis);
- (2) *Redescription* of component causes;
- (3) *Retrodiction* of possible (antecedent) causes of components via independently validated normic statements; and
- (4) *Elimination* of alternative possible causes of components. (Bhaskar 1979, 165.)

The inferential structure of this model resembles the process known as 'inference to the best explanation', since it proceeds by first postulating and then eliminating possible explanation candidates until what is left is the best current explanation of the event in which we are interested. This model does not say, however, much about the nature of scientific explanations. It can be also argued that the abstract RRRE-model gives little guidance in picking out mechanisms that are explanatorily the most relevant in certain concrete explanatory situations (Kuorikoski & Ylikoski 2006, 7-8). It also presupposes the availability of "independently validated normic statements" which refer to mechanisms or generative structures that might be active in any given "complex event" we are trying to explain (Kemp & Holmwood 2003, 168-169). As was shown earlier, Bhaskar holds that in the context of the natural sciences, these kinds of statements can be tested by means of scientific experiments, whereas in the social sciences experiments are not possible. Now, given that for many critical realists the only methods that can be used in inventing and validating statements and theories in the context of the social sciences seem to be transcendental argumentation (Bhaskar 1979) and abstraction (Sayer 1992), the previous model is less than helpful insofar as we are interested in the empirical testing of our social scientific explanations. It can be also argued that

Bhaskar's criterion of explanatory power alone is an insufficient criterion in deciding rationally between competing social scientific theories (Töttö 2004, 280-281). It seems to me that Lawson's (1997, 199-226; 2003, 79-109) ideas on contrastive demi-regularities and contrast explanations may offer some solutions to these problems, which I shall return to in the third and fifth article.

Despite Bhaskar's schematic views of the process of explanation and some general ideas regarding the development of the natural sciences, it can be argued that RTS does not contain an elaborated epistemology or methodology of the natural sciences. It seems to me also that Bhaskar's view of the natural sciences is largely built upon a transcendently realist interpretation of certain classical physical and chemical laws, and certain experimental practices in physics and chemistry. The problem with this view is that it is narrow when considering the plurality of natural scientific theories and research practices in the natural sciences today (Benton 1981; Patomäki 2009). It might even be argued that if Bhaskar had taken the theories and practices of today's biological sciences as his starting point, then his transcendental realist theory of science would also have been rather different. I shall revisit these issues in the first and second articles. It has also been argued, rightly in my view, that critical realists have not utilized the resources of the recent discussions on explanation in the philosophy of science in order to develop their own views on explanation further (Kuorikoski & Ylikoski 2006).

Bhaskar nevertheless defends two general epistemological theses, which he dubs *the thesis of epistemic relativity* (or epistemological relativism as it is also called) and *the thesis of judgmental rationality*.

[The thesis of] epistemic relativity [...] asserts that all beliefs are socially produced, so that all knowledge is transient, and neither truth-values nor criteria of rationality exist outside historical time. The other incorrect thesis of judgmental relativism [...] asserts that all beliefs (statements) are equally valid, in the sense that there can be no (rational) grounds for preferring one to another. (Bhaskar 1979, 73 cf. 1978, 249.)

Instead of accepting judgmental relativism, Bhaskar (1979, 73-74) argues for judgmental rationalism according to which there are socio-historically developed rational grounds for preferring one belief, statement or theory over another. This does not, of course, mean that people always acknowledge these grounds or that rational judgments are always made, but it means that rational judgments are in most cases possible. Hence, Bhaskar rejects not only epistemological absolutism or foundationalism but also the extreme form of truth-relativism according to which all beliefs, statements or theories are equally true. He also holds that scientific knowledge is always fallible, even though not all scientific theories are equally fallible, and that scientists are usually able to make rational comparative judgments between competing scientific statements or theories (Bhaskar 1978, 43; 1986, 70-93).

The exact content of Bhaskar's thesis of epistemic relativity remains somewhat vague, however, since it is not entirely clear as to how strong the form of relativism is, to which he is ready to commit himself. In the following, instead of considering his views on the criteria of rationality and the concept of

rationality, I will focus on the issues that are related to conceptual relativity and the concept of truth. With this in mind, a modest version of conceptual relativism states that socially formed beliefs and statements are relative to socio-historically formed conceptual schemes in the sense that they can be stated and their truth can be examined only by using some conceptual scheme. More radical (though not an extreme) doctrine of truth-relativism states, in turn, that the same belief or statement may be true in one conceptual scheme and false in some other conceptual scheme. From the previous kind of conceptually relativist perspective, we can say that some beliefs and statements can be presented only by using concepts belonging to a certain conceptual scheme, while some other beliefs and statements cannot be presented by using the conceptual resources of this particular scheme, even though there may be other – perhaps *partially* incommensurable (not incomparable!) – conceptual schemes which are suitable for their presentation. As for example Searle argues (1995, 160-167), this kind of conceptual relativism is perfectly compatible with – at least a minimal form of – ontological realism insofar as it denies that the same belief or statement can be true in one conceptual schema while being false in another.

The previously defined version of truth-relativism is a stronger and more dubious position than the moderate version of conceptual relativism, since the truth-relativist has to deny a view according to which the identity of the meanings of two (or more) statements implies the identity of their truth-values. Furthermore, an opponent of truth-relativism can always note that, if it is assumed that the truth of all statements is relative to some conceptual scheme, then it is possible that the thesis of truth-relativism is true in the conceptual scheme in which it is presented while being false in others. The truth-relativist may attempt to avoid this problem by applying the notion of non-relative truth in a restrictive sense to the thesis of truth relativism, while maintaining that the truth of all other statements except this thesis are relative. This approach is, however, problematic, since this restriction of the domain of applicability of the concept of non-relative truth is completely arbitrary. (see Raatikainen 2004, 64-69.) In addition, it seems to me that the position of truth-relativism is not compatible with the basic views of Bhaskar's realist ontology, since truth relativism leads easily to such ontological relativism in which all ontological views are relativized to conceptual schemes.

A related ambiguity in Bhaskar's early formulations of his thesis of epistemic relativity is that he rejects the correspondence theory of truth without providing any viable account of the concept of truth in its place. In his criticism of correspondence theory, Bhaskar (1978, 249-250) assumes that all versions of the correspondence theory of truth necessarily presuppose two views: (i) that propositions can be directly compared with reality, and (ii) that the thought or statement and its object have to be similar to each other. Both of these problematic views are nevertheless denied by the current advocates of the correspondence theory of truth in the philosophy of science, who regard the correspondence theory as providing a *definition* of the concept of truth – not *criteria* for identifying true propositions – and who do not interpret the notion of

correspondence in terms of similarity or resemblance. These philosophers also conceive the function of the concept of truth in scientific research as being a kind of regulative ideal and maintain that it is possible to make rational comparative judgments of the degree of truthlikeness (or verisimilitude) between two or more scientific representations (e.g. beliefs, statements, theories), which are about the same entity, without comparing these representations directly to reality (Niiniluoto 1999; see also Searle 1995, 177-226). I shall hold back from discussing views on the correspondence theory of truth in the current philosophy of science any further, since these doctrines tend to be rather formal and technical. In any case, it seems to me that Bhaskar has failed to rebut all versions of the correspondence theory of truth (for a similar view, see Collier 1994, 239-242). It also appears that, in order to develop a plausible epistemology, critical realists need an account of the concept of truth in which the concept of truth is defined in terms of a relationship between representations and the entities (or parts of the world) they are about (cf. Bhaskar 1993).

As should now be apparent, the main content of RTS is ontological, with far reaching implications for the subsequent tradition of critical realism, since many critical realists still deal almost exclusively with ontological issues. Bhaskar's alleged "ontological boldness" and "epistemological cautiousness" has also been hailed by some writers (e.g. Outhwaite 1987). In my view, however, the weakness of critical realist epistemology and methodology is not a thing that should be celebrated. Bhaskar's reluctance to present elaborated epistemological and methodological views not only leads to difficulties when his ontological views are applied to social scientific research but also questions some of his ontological views and his way of justifying ontological positions by means of transcendental arguments (for criticisms of critical realist epistemology see Layder 1990; Walters & Young 2001; Kemp & Holmwood 2003; Töttö 2004; Kuorikoski & Ylikoski 2006). Some of these problems are examined further in the following articles. My intention here is not to deny that some other critical realists, such as Andrew Sayer (1992, 2000), Margaret Archer (1995, 2000), Tony Lawson (1997, 2003) and Peter Manicas (2006), have developed Bhaskar's epistemological, methodological and social theoretical views further and occasionally also criticized them constructively. Some of their views are also considered in the following articles.

PN extends the realist philosophy of science that was developed in RTS to psychology and the social sciences. It also seeks to provide a solution to so-called agency-structure -problem by means of developing a realist social ontology, which conceives social reality as essentially relational and stratified. In this book Bhaskar (1979, 3) also defends a doctrine of *critical naturalism* according to which:

it is possible to give an account of science under which the proper and more or less specific methods of both the natural science and social sciences can fall. But it [critical naturalism - T.K.] does not deny that there are significant differences in these methods, grounded in real differences in their subject matters and in the relationships in which their sciences stand to them (Bhaskar 1979, 3).

Bhaskar (1979, 48-69, 1986, 104-136) holds that specific methods of the social sciences differ from those of the natural sciences, due to the supposition that the social sciences are restricted to the study of exclusively open systems without the opportunity of obtaining experimental closures. Unlike the natural sciences, social sciences are also “part of their own field of inquiry, in principle susceptible to explanation in terms of the concepts and laws of the explanatory theories they employ” (ibid. 59). I shall revisit the specific content and implications of these views later.

Bhaskar’s critical naturalism presupposes that the positivist account of natural science is replaced by the realist theory of science developed in RTS. Now, assuming that his transcendental realist account of natural science is valid, Bhaskar (ibid. 26-27) argues that it is possible for the social sciences to be *scientific* in precisely the same sense as the natural sciences, even though their specific methods differ. This means that the social sciences, analogous to the natural sciences, should aim at classifying and explaining social phenomena by means of developing theories that refer to social structures and generative mechanisms. In order to avoid confusion, it is important to keep in mind that questions concerning methodological naturalism (or methodological monism), which deal with the relationships between methods used in different sciences, are different from issues concerning meta-philosophical naturalism (and naturalism in philosophy of science), which deal with the relationship between philosophy and the empirical sciences. These latter issues are discussed in the first two articles. In addition to arguments for the possibility of critical naturalist social scientific research, PN also contains critiques of positivist, individualist and hermeneutic philosophies of the social sciences. This book also introduces the fundamentals of Bhaskar’s social ontology, which is elaborated in some respects in his subsequent works.

In PN Bhaskar (ibid. 124-125) seeks to provide an account of the ontological relationship between natural and social entities by means of developing his *synchronic emergent powers materialism* (SEPM). This view is strictly separated from ontologically reductionist versions of materialism and physicalism. SEPM comprises a schematic ontological theory that is built upon the ontological concept of emergent power, which is commonly taken to refer to the properties of wholes which are not mere aggregates of the properties of their parts and which are able to causally modify the properties of the parts. Bhaskar maintains that human beings and social structures possess these kinds of emergent powers, but holds that SEPM “does not require the postulation of any substance other than matter as the bearer of the putative emergent powers” (Bhaskar 1986, 113). This view, according to Bhaskar (ibid. 113), is also “consistent with a diachronic explanatory reduction”, which essentially refers to evolutionary explanations of these powers in terms of the Darwinist theory of biological evolution or non-reductionist version of the Marxist theory of historical materialism. It will be argued in the third and fourth article that Bhaskar’s concept of emergent power is far from consistent, since he uses it in at least three different senses without separating them clearly from each other. In

my view Dave Elder-Vass (2005, 315) is also right in pointing out that even though this concept is foundational to critical realist ontology, “Yet few critical realists have examined the nature of emergence itself, while those who have done so have been far from consistent in their approaches”. Elder-Vass’s (2005; 2007a) own works may be the exception that proves this rule.

In addition to SEPM, Bhaskar’s (1979; 1986; 1989) social ontology is comprised of his *relationist concept of social structure* and *transformational model of social activity*. Both Bhaskar and other critical realists (e.g. Sayer 1992, Archer 1995, Lawson 1997) commonly analyze the concept of social structure in terms of internal relations between social positions, such as capitalist and worker or teacher and pupil, and positioned practices, such as the capitalist mode of production or the education system. From this perspective, society – conceived of as a totality of internally related social structures – always pre-exists and conditions the intentional actions of individual agents, who, in turn, reproduce or transform the society via intended and unintended consequences of their actions. Bhaskar (1979, 43-44) writes accordingly that:

Society is both the ever-present *condition* (material cause) and the continually reproduced *outcome* of human agency. And praxis is both work, that is conscious *production*, and (normally unconscious) *reproduction* of the conditions of production, that is society.

This view both presupposes that human beings are capable to intentional action and makes a clear distinction between interactions of people and social structures (or society), whose causal powers, Bhaskar (e.g. *ibid.* 31-32) argues, differ from each other. In PN, Bhaskar also defends vigorously a causal interpretation of agents’ reasons for their actions. This view is commonly rejected by the advocates of hermeneutical tradition.

By developing a transformational model of social activity, Bhaskar (1979, 38-47) strives to avoid the problematic views that are, so the argument goes, associated with individualistic and holistic methodologies/ontologies and social ontologies in which social structures are not clearly separated from interactions between individual agents. Bhaskar uses Max Weber’s works as an example of just such voluntaristic individualism, which reduces structures ontologically to agency. Émile Durkheim’s views function, in turn, as a representative of such ontological collectivism, which amounts to a reification of social structures. Finally Peter Berger and Thomas Luckmann exemplify just such a dialectical view which fails to clearly separate agency from structures. Bhaskar’s causal account of agents’ reasons, his transformational model of social activity and his concept of social structure are examined and evaluated in the following articles. For this reason I will not deal with them any further here. Nevertheless it should be noted that other critical realists, most notably the sociologist Margaret Archer (1995, 2000), have elaborated these views in the context of social theory. It would seem that the majority of critical realists largely accept the essential ontological views Bhaskar presents in his first two books.

PN also introduces the idea of explanatory critique, elaborated further in Bhaskar's subsequent works, most notably in his *Scientific Realism and Human Emancipation*. In broad terms, explanatory critiques aim at showing that a necessary condition of the reproduction of a certain social structure S, such as the capitalist mode of production or patriarchy, is that the beliefs of agents about the nature of this structure have to be false or somewhat misleading. In other words, if oppressed agents only knew the true nature of the structure S, then it would be unreasonable for them to continue reproducing it, since it functions against their interests. Then, assuming that truth is morally valued over falsity, it can be inferred *ceteris paribus* that S is bad and should be changed, precisely because it tends to produce false beliefs. (Bhaskar 1986, 177.) In this context, Bhaskar (1979, 69-83) also seeks to rebut a Humean distinction between facts and values by demonstrating how values can be allegedly derived from facts and facts from values – the latter view is especially dubious and Bhaskar (1986) abandoned it later. He nevertheless continues to hold that social scientific explanations can entail value judgments regarding the social structures that produce the social phenomena under explanation (Bhaskar 1998, xviii-xix).

Before comparing critical realism systematically with other traditions, I would like to emphasize that Bhaskar's philosophical ideas have numerous antecedents. It seems to me that the failure to deal with these antecedents has led some critical realists, such as Andrew Collier (1994, ix), to overemphasize Bhaskar's originality. As Bhaskar (1991, 141) himself acknowledges, Aristotle, Bacon, Locke, Kant, Leibniz, Hegel and Marx are important classical philosophers for him, since his critical realism strives to combine some aspects of their work. As will be shown in the third article, Bhaskar's early views were also heavily influenced by Rom Harré's (1970) realist philosophy of science and the joint works of Harré and his collaborators (Harré & Secord 1972; Harré & Madden 1975). As is well known, Harré (2002) has more recently distanced himself from critical realism, even though he continues to advocate scientific realism in the philosophy of natural science. The relationship between Harré's and Bhaskar's views is analyzed in the third article.

Marxist philosophy of science and Marxist social science contain other important antecedents for Bhaskar's views. His notion of explanatory critique clearly connects his work to the tradition of Marxism and he explicitly admits that the Marxist concept of ideology can be seen as the root of this notion (Bhaskar 1979, 86-91; 1986). Bhaskar's notion of tendency also contains Marxist elements. Furthermore, Louis Althusser's (1979) distinction between thought object and real object resembles Bhaskar's distinction between transitive and intransitive objects of knowledge. As Bhaskar (1989, 187-188) acknowledges, his notion of multiple determination of events in open systems is influenced by Althusser's (1979) concept of overdetermination. The concept of social structure in critical realist social ontology is partially rooted in the tradition of structuralist Marxism, even though Bhaskar (1979) clearly denies the viability of structural and economic determinism in social ontology. His notion of the transformational model of social activity is also essentially Marxist.

It can also be noted that within the tradition of the analytic philosophy of science there was a strand of philosophical movement towards scientific realism which had already begun in the 1950's and gained many supporters during the 1960's and 1970's. At that stage, the realistic interpretation of scientific theories was systematically developed, among others, by Herbert Feigl, Wilfrid Sellars, J.J.C. Smart, Karl Popper, Mario Bunge and Hilary Putnam (Niiniluoto 1999, 6). From this perspective, Bhaskar's early critical realism can be seen as one of the second wave realistic philosophies of science that followed the first. Furthermore, Bhaskar's doctrine of synchronic emergent powers materialism bears resemblances to Mario Bunge's (1979, 1981) views on causality and emergence, although in detailed examination it turns out that they are, as will be argued in the fourth article, significantly different. Philosophers that formed the so-called school of British emergentists, most notably C. D. Broad, C. Lloyd Morgan, and Samuel Alexander, had already developed in a detailed way an ontological concept of emergence in the 1920's and 1930's (for an overview of the views of this school, see Mc Laughlin 1992). As Bhaskar (1978, 8-9) himself acknowledges, the formation of the more historical and social view of the natural sciences that developed during the 1960's and 1970's as a result of the work of philosophers of science such as Thomas Kuhn, Imre Lakatos, Paul Feyerabend, Stephen Toulmin and Mary Hesse was also an important starting point for him.

Moreover, Bhaskar was not the only philosopher to develop realist ideas in the philosophy and methodology of the social sciences at that time. Russel Keat and John Urry's book *Social Theory as Science* also applied systematically a realist philosophy of science in social theory at the same year in which Bhaskar's RTS was published. Like Bhaskar, Keat and Urry were also influenced by Harré's realist philosophy of science and interpreted Marx's theory of the capitalist mode of production from the point of view of scientific realism. One can also find realistic themes in the late 1970's in the works of Anthony Giddens (1976, 1979), though he never explicitly grounded his structuration theory on any specific realistic philosophy of science. Some authors argue that Bhaskar's transformation model of social activity is largely compatible with Giddens' structuration theory (Stones 2001) and this view can be supported by noting that Bhaskar (1979, 44) uses approvingly Giddens' term 'duality of structure' in presenting his model. Other critical realists, most notably Margaret Archer (1995), try to show, in contrast, that critical realist social ontology should be conceived as fundamentally different and incompatible with Giddens' theory, since the previous theory distinguishes social structures strictly from agency while the latter conflates structures and agency. It seems to me that this seemingly endless controversy is largely due to the conceptual ambiguities that vitiate Bhaskar's transformational model of social activity and his concept of social structure. A similar point might also be made regarding structuration theory, although not analyzed in this study. The 1970's also saw other British social scientists, such as Ted Benton and Roy Edgley, contributing discussions that dealt with the application of realistic

philosophy to social science. Hence, it could be said that realistic ideas were in the air among British social scientists and philosophers of the social sciences at that time (see Keat & Urry 1982, 229).

1.4 Critical realism and positivism

A recurrent theme in the early works that apply a realist philosophy in the context of social sciences is the critique of positivism. Many critical realists have also been keen critics of positivist views in the social sciences. Some of these critiques tend to be problematic, since their conception of positivism is oversimplified or even distorted. For example, classical positivism is not always clearly distinguished from the tradition of logical positivism and logical positivism is often misinterpreted as a unified school whose members advocated a certain set of philosophical theses. I try to point out first that both of these views are misleading. I then move on to analyze and comment on Bhaskar's views of positivism, taking my cue from their wide acceptance in critical realist literature.

Classical positivism had emerged already by the early nineteenth century. This mainly social scientific and political movement was founded by Henri Saint-Simon and August Comte (Töttö 1996). Logical positivism (or logical empiricism), in turn, initially developed at the beginning of the twentieth century and focused above all on natural science (especially physics) and employed logical analysis by means of modern formal logics (Sintonen 2002). Logical positivism initially developed mostly in discussions between the members of the so-called Vienna circle, such as Rudolf Carnap, Philipp Frank, Hans Hahn, Otto Neurath, and Moritz Schlick (Niiniluoto & Koskinen 2002).

Now, although there are certain similarities between their views, such as their admiration of scientific knowledge and their attempt to unify sciences, it is important to note that the focus of these two positivisms was markedly different and their fundamental philosophical assumptions were also partially incompatible. Classical positivists, for example, did not usually advocate a strict epistemological empiricism. They also rejected 'Hume's law', according to which, value sentences cannot be logically derived from factual sentences. Instead of separating science from religion and politics, Saint-Simon and Comte aimed at creating a form of secular science-based religion and sought to transform politics into a science (Comte's sociology and classical positivism is dealt in Töttö 1996). In contrast to classical positivism, logical positivism was not a self-consciously political movement, since logical positivists never presented any political program and their personal political views were diverse. This is not to deny, however, that many individual members of Vienna circle were politically active. Unlike classical positivists, most logical positivists were also empiricists and keen advocates of Hume's law (for recent studies on Vienna circle see Niiniluoto & Koskinen, 2002). Due to these differences a

failure to make a distinction between classical and logical positivism leads easily to a misrepresentation of both.

In many critiques of positivism, logical positivists are also represented as advocating a certain static set of philosophical theses, such as the verifiability thesis of meaning, which are then criticized one by one. This is, however, an over-simplification of logical positivism. As recent studies of this tradition have clearly shown, the philosophical theses that were presented by members of the Vienna circle were already being critically discussed by logical positivists in the 1920's and were either changed or abandoned altogether during the 1930's mostly as a result of criticisms that were presented by logical positivists themselves (Manninen 2002).

Critical realists are not alone in participating in the social construction of caricatures of positivist philosophy and methodology. It can be argued that advocates of postmodernism, social constructionism and qualitative research have also actively contributed to this process. For example, Guba & Lincoln (1994) construct a caricature of positivism in their distinction between competing "paradigms" of social research. One consequence of the pervasiveness of the critiques of simplified and distorted versions of positivism in much recent discussion on the methodology of the social sciences has been that the term 'positivism' has become a label applied solely to one's antagonists (see also Töttö 1997). Recent studies of the tradition of logical positivism have clearly shown that it was a much more diversified and self-critical philosophical tradition than has been acknowledged by many of its critics (see Koskinen & Niiniluoto 2002; Sintonen 2002; Töttö 2004, 21-51). This is not to say, however, that the views of classical or logical positivists were valid.

Bhaskar's critique of positivism, which is clearly influenced by Harré and his associates (Harré & Secord 1972; Harré & Madden 1975), also contains this kind of simplifying assumption, since he fails to examine the philosophical views of real positivist philosophers of science but rather directs his criticisms towards his own ideal-typical reconstruction of "positivism" or "the positivist account of science". It has also been argued that Bhaskar's views on David Hume's account of causation and Hume's place in the positivist tradition are misleading, since Hume did not consistently advocate a regularity theory of causation (see Walters & Yuong 2001, 492-496). Furthermore, the works of Émile Durkheim, who can be seen as an adherent of classical positivism, are also intentionally represented in a stereotypic way in Bhaskar's (1979, 39-47, 176-177) early writings.

Bhaskar's (1986, 226) general characterization of positivism is worth quoting:

At its most general, positivism is a theory of the nature, omniscience and unity of science. In its radical shape it stipulates that the only valid kind of (non-analytic) knowledge is scientific, that such knowledge consists in the description of the invariant patterns, the co-existence in space and succession over time, of observable phenomena; and the role of philosophy is analysis and perhaps summary of and/or propaganda for scientific knowledge so conceived. As a species of empiricism it is characterized by a reductionist view of scientific theories, a deductivist notion of scientific laws and phenomenalist interpretation of scientific experience. Its

naturalistic insistence on the unity of science and scientific disavowal of any knowledge apart from science induce its aversion to metaphysics, insistence upon a strict value/fact dichotomy and tendency to historicist confidence in the inevitability of scientifically mediated progress. Most of positivism is already contained elegantly expounded in the writings of Hume.

Even though this characterization captures many important features of positivist philosophies, it appears that very few actual philosophers who have either called themselves or who have been commonly labeled as positivists would underwrite all of the views above. For example, a phenomenalist interpretation of observational statements – statements rather than experience, since logical positivists were not particularly interested in scientists' experience but rather scientific language – was not accepted by all logical positivists. Semantic reduction of the meanings of theoretical terms to observational language was also criticized by Rudolf Carnap and other logical positivists. Carnap argued in his article *Testability and Meaning*, which was already in circulation in 1936, that dispositional terms, such as 'breakable' and 'elastic', cannot be exhaustively defined in terms of observational statements. One might also question whether logical positivists were convinced by "the inevitability of scientifically mediated progress", since most of them lived in Germany and Austria in the 1930's. Hence, they experienced the emergence of Nazi rule and the *Anschluss* of Austria with Nazi-Germany. Many of these, along with other famous German scientists, were forced to emigrate, mostly to the United States. Logical positivists were also rather critical of many scientific disciplines, due to their normative models regarding the deductive structure scientific theories and explanations being not commonly followed by scientists. As I have already noted, it is also far from self-evident that "most of positivism is already contained elegantly expounded in the writings of Hume".

To be fair, Bhaskar (1986, 225-229) occasionally recognizes some varieties of positivism, such as classical and logical positivism, even though he does not examine positions of real positivist philosophers or sociologists in detail. It seems to me, however, that Bhaskar tends to reconstruct positivism largely as an easy target for critical realist critique. This is exemplified in his insistence on interpreting logical positivism as an implicit ontology, even though logical positivists themselves, as Bhaskar acknowledges, rejected metaphysics as meaningless. From this perspective critical realism can present itself as an ontology which discovers deep essences of things behind the superficial and distorted phenomena, while positivists become stuck in precisely these superficial phenomena. One consequence of this characterization of positivism seems to be that Bhaskar and other critical realists often fail to recognize a whole range of philosophical and methodological positions that lie somewhere in between Bhaskar's simplified version of positivism and their own critical realism. This fact also weakens the plausibility of Bhaskar's (ibid. 224-308) claims that positivism has functioned not only as an ideology of science, but also as an ideology of the political right in capitalist societies. This interpretation can also be questioned by pointing out that most members of the Vienna circle were also members of Austrian Social Democratic party

(Manninen 2002, 31), and one of the leading figures of this circle, namely economist Otto Neurath, advocated a variety of scientific Marxism (ibid. 38-39). This is not to deny that Bhaskar's critique of positivism might apply to certain varieties of positivism, but, when reading this critique, it should be kept in mind that positivism comes in many varieties and that positivist tradition(s) have tended to be self-critical.

In RTS the term 'positivism' is not used often. Bhaskar in this book directs his criticism mostly towards empirical realism, which is, according to his view, presupposed in both classical empiricism and transcendental idealism. Empirical realism is an ontological view according to which the world consists of atomistic and perceivable events that comprise invariant empirical regularities. Empirical realists also assume that causal relations can be interpreted in terms of constant conjunctions of atomistic events and deny the existence of natural necessity. Furthermore, empirical realists are implicitly committed to the flat and reductionist ontology, which denies that the world is stratified in the sense that mechanisms and structures exist at different levels of reality and that higher level mechanisms and structures possess emergent causal powers by virtue of which they are able to modify the materials out of which they were formed. At the epistemological level Bhaskar argues that the ontology of empirical realism is presupposed *inter alia* in the deductive-nomological model of explanation developed by Karl Popper and Carl Hempel, in monistic (or linear) theories of scientific development and in deductive accounts of the structure of scientific theories. He also strives to show that these ontological and epistemological doctrines are not compatible with the intelligibility of some of the most important natural scientific practices, such as experimentation and criticism, nor with the actual development of the natural sciences.

In the social sciences empirical realism is presupposed *inter alia* in quantitative social studies that apply statistical methods based on correlations of variables and omit theory-construction altogether. By borrowing Harré's (1993) terms, Andrew Sayer (1992, 243) labels this kind of survey studies as *extensive* in contrast to *intensive* qualitative studies. The latter kind of study allegedly produces deep explanatory knowledge, while the former kind of study supplies only descriptive knowledge of the superficial features of large populations. In my view the failure to disconnect quantitative methods from positivism has lead many critical realists to ignore theoretically informed uses of statistical methods of causal modeling in the current social sciences (for a similar argument see Töttö 2004). Empirical realism and the positivist account of science, according to Bhaskar (1979, 107-108, 164, 166), are also visible in the doctrine of logical behaviorism and behavioristic psychology in which cognitive processes and subjective meanings are ignored. Here he largely follows Harré and Secord's (1972) influential criticism of the uses of experimental methods in behaviorist social psychology. As behaviorist approaches have become rather rare in current psychological and social scientific research, I will not deal with them here any further. These are not, however, the only approaches that are

vitiated by a positivist conception of science and empirical realist ontology in the contexts of human sciences.

In PN Bhaskar contends that the positivist account of science, especially the deductive-nomological model of explanation, tends to be presupposed in rational choice theories that aim at explaining human actions in terms of the maximization of subjective utilities by atomistic individuals in given social circumstances. He also argues that the anti-naturalistic hermeneutical tradition, exemplified by Peter Winch's work, is implicitly committed to the ontology of empirical realism at the level of meanings. Bhaskar sets out to show that this tradition has to accept meanings of subjects uncritically as given and incorrigible, since it restricts its attention solely to the subjects' own meanings and denies the existence of the material dimension of social life. It seems to me, however, that the former part of this criticism does not apply to the so-called hermeneutics of suspicion, even though it may be valid in relation to some advocates of hermeneutics in the social sciences (for hermeneutics of suspicion see Heiskala 2000, 165-173). Be that as it may, Bhaskar nevertheless states in PN that all of the above views not only presuppose a false positivist account of natural scientific research, but also fail to meet the transcendently necessary conditions of intentional human action. In addition, he tries to show that they contribute to the ideological distortion of the true nature of social reality.

Despite of his criticism of the anti-naturalist versions of hermeneutical philosophies of the social sciences, Bhaskar accepts that social reality includes an irreducible hermeneutical dimension. This claim is supported by his insistence that causal relations in social life are always mediated through intentional human actions and his interpretation of social structures as concept- and activity dependent. He nevertheless denies that subjects' conceptions of what they are doing are incorrigible. In some cases, he argues, it is necessary for the endurance of certain social structures, such as capitalist relations of production, that an agent's own conceptions of social reality are systematically distorted. He nevertheless seeks to avoid just such a version of ontological and methodological holism, which assumes that subjects are merely bearers of the holistic social structures that determine their behavior. It follows from these views that the hermeneutical method of *Verstehen* is a necessary starting point for empirical social scientific studies, even though actors' own accounts are held as corrigible and limited. (Bhaskar 1979, 27-28, 48-49, 176-177; 1986, 135-136; see also Sayer 1992.) I will return to Bhaskar's views on activity and the concept-dependent nature of social structures in the fifth article.

1.5 Critical realism and Marxism

Many writers who applied the doctrine of scientific realism to social scientific discourse in the 1970's were influenced by the works of Karl Marx and Western academic Marxism in general. It might be even argued that if positivism was

largely constructed as the most important opposite of their scientifically realist views, then Marx's works and the tradition of Marxism can be seen as providing the most important conceptual resources in advancing their own realist social ontology and methodology of the social sciences.

Marxist themes are, for example, clearly visible both in Bhaskar's PN and in Keat and Urry's *Social Theory as Science*. These authors maintain that Marx's theory of the capitalist mode of production provides the most elaborate example of the implicit application of a realistic philosophy to the social sciences. Bhaskar (1979, 32, 39) contends explicitly that Marx sought to develop a relational social ontology, which is also presupposed in his own transformational model of social activity. More recently he has also written that "Marx's work at its best illustrates critical realism; and critical realism is the absent methodological fulcrum of Marx's work" (1991, 143) and that "the transitive [i.e. epistemological and methodological] dimension in critical realism is congruent with a Marxist theory of society and influenced by it" (ibid. 143). As was already indicated, Bhaskar's concepts of transitive and intransitive objects of scientific research and his concepts of multiple determination and social structure also have affinities with Althusser's (1979) structuralist Marxism. Andrew Sayer's (1992; see also Lawson 1997) concept of abstraction is also clearly Marxist and his primary examples of realist social theories are Marx's theories of historical materialism and the capitalist mode of production. In addition, Bhaskar (1991, 163) notes that Marx never presented a thoroughgoing critique of empiricism, even though in *Das Kapital* Marx was methodologically committed to scientific realism.

As the above already indicates, Bhaskar contends that realist themes remained rather underdeveloped in Marx's works. He also suggests that they have played a comparatively minor role in the subsequent traditions of Marxism (Bhaskar 1991, 162-185). Hence, it can be argued that one of the central aims in Bhaskar's works in the philosophy and methodology of the social sciences is to provide a realistic grounding for Marx's theory of the capitalistic mode of production. This also seems to be one of the aims of Keat and Urry (1982). Those who deny that Marx's theory is in need of critical realist grounding might nevertheless argue that critical realist social ontology is in fact largely based on Marx, since it contains the following Marxist views: interpretation of causal laws as tendencies, distinction between phenomenal forms of social life and essential structures that produce them, the essentially Marxist model of the reproduction of society and Hegelian-Marxist concepts of internal relation and totality. Certain proponents of Marxism might also argue that Bhaskar's reading of Marx is one-sided or misleading in some respects. For example, Bhaskar's (1979, 65) view according to which Marx can be seen as employing "transcendental procedure" in *Das Kapital* might sound odd to many Marxists. They can also point out that Bhaskar largely omits Marxist reflection theory of consciousness and that his early views are not dialectical enough.

It appears to me that these remarks already indicate that critical realism has close affinities to Marxism, even though not all critical realists are Marxists

nor do they conceive the relationship between these two traditions in a similar way. Brown, Fleetwood & Roberts (2002, xii) have, for example, distinguished following three broad views regarding the relationship between critical realism and Marxism: “critical realism can add to Marxism without taking anything away; Marxism is in no need of the services of critical realism; and Marxism and critical realism have something to gain from each other.” Hence, although Bhaskar was undeniable influenced by Marx’s works, the relationship between these two traditions is rather complicated (for discussion on the relationship between critical realism and Marxism see Brown, Fleetwood & Roberts 2002).

Bhaskar (1991, 139) has also pointed out that there is a historical connection between the emergence of critical realism and the formation of the so-called new social movements in the late 1960’s, when Marxism gained many enthusiastic advocates in leftist student movements especially in Western Europe. According to Andrew Collier (1994, 262), Bhaskar was also “active in the events of ‘1968’”. From this perspective, it is not at all surprising that human emancipation has been the elemental topic of Bhaskar’s works. One of the aims of his critical realism has been to point toward the role for critical social science and ideology critique in the project of human emancipation. In particular, his doctrine of explanatory critique seeks to provide an essentially Marxian model for the emancipatory social scientific research (Bhaskar 1986). Furthermore, this doctrine tries to break down the Humean conceptual dichotomy between facts and values that is commonly advocated by empiricist and analytical philosophers.

Even though I admit that the aspiration to human emancipation and the doctrine of explanatory critique are essential features of Bhaskar’s critical realism and that they might, at least partly, explain its growing popularity among social scientists, I will not deal with these themes in detail in this study. It is nevertheless worth noting here that some critical realists, such as Hugh Lacey (1997) and Andrew Sayer (2000), do not accept Bhaskar’s model of critical social science, since, according to their views, it contains certain problematic simplifications about the interplay between moral values and facts in the social sciences and undermines the difficulties that are involved in justifying normative conceptions about the current social reality and in presenting viable suggestions of how it should be changed in order to promote human emancipation. These writers also complain about Bhaskar’s reluctance to deal with actual social scientific practices and the lack of successful examples of explanatory critiques in critical realist tradition.

So far I have mostly commented on the relationship of critical realism with Marx’s own works rather than to Marxist tradition. A reason for this is the fact that there exists no single Marxism but rather different Marxisms, which focus on different phases and aspects of Marx’s work and interpret Marx’s writings differently. Some Marxist traditions also seek to combine Marx’s views with other philosophies and methodologies. Consequently their relationships with critical realism are also different. For example, critical realism appears to have more in common with Louis Althusser’s structuralist Marxism than with

Theodor Adorno's, Max Horkheimer's and Herbert Marcuse's critical theory, which was initially developed in the Frankfurt school in the early twentieth century. Further comparison between critical realism and different Marxisms is nevertheless beyond the scope of this study.

1.6 Critical realism, postmodernism and social constructionism

As is well-known, the postmodernist movement in the social sciences aimed to show *inter alia* that grand narratives, such as enlightenment, modernization and scientific progress, have lost their plausibility and that a new kind of pluralist, ambiguous, contingent and fragmented society has emerged. I would agree that postmodernist views succeeded in challenging some of the taken-for-granted beliefs about modernity, rationality and scientific progress. Moreover, from the point of view of the social sciences, as critical realists and others have shown, the most constructive ideas of the postmodernists were not only internally incoherent and obscure but also anti-scientific in the sense that they amounted to the abandonment of scientific research and rational philosophical argumentation altogether (Bhaskar 1991, Sayer 2000; Lopez & Potter 2001; Fleetwood 2005). Critical realists, in contrast, commonly conceive of themselves as heirs of the enlightenment and underlabourers of the sciences. They also defend the idea that social inquiry can be both scientific and critical.

Postmodernism has never been a unified methodology or philosophy of the social sciences and only few philosophers or social scientists have accepted the label 'postmodernist'. For this reason a detailed comparison of critical realism and postmodernism would be complicated. At least in the social sciences, the influence of the postmodernist movement – or at least the use of the term 'postmodernism' – has also gradually declined since the 1990's. One reason for this would appear to be that many postmodernist views have met serious – and in my view largely valid – criticism presented by critical realists and others. In contrast to postmodernism, the social constructionist movement is still vital in the social sciences. For these reasons I will not discuss postmodernism any further, but move on to consider social constructionism. My intention is not to deny, however, that there are connections between these two movements (Burr 1995, 12-14). Indeed some postmodernist ideas seem to have found a new home in the social constructionist movement.

A classical formulation and defense of social constructionism in social theory is Peter Berger and Thomas Luckmann's book *The Social Construction of Reality*, which was first published in 1966. In this study on the sociology of knowledge, Berger and Luckmann examine the role of everyday-knowledge in social life and present an influential theory of institutionalization. According to this theory, institutions are conceived as typified, externalized and objectified patterns of people's reciprocal expectations regarding the roles and actions of themselves and others. These kinds of institutions are socially constructed via

ongoing intentional and gradually habitualized social activities. In other words, insofar as people, who are engaged in reciprocal action, externalize their typified patterns of expectations and beliefs, they become objectified in the sense that new actors begin to take them for granted and, consequently, this newly formed institution turns out to be resistant to being changed by the will of any particular individual. Berger and Luckmann also deal with the formation of identity in the processes of primary and secondary socialization and different forms of legitimation of objectified institutions in social life. Hence, it can be argued that they present an account of the social construction of *social* reality, even though the name of their book, perhaps slightly confusingly, uses the term 'reality' without any qualification.

According to Bhaskar's (1979, 40) reading, Berger and Luckmann present a dialectical theory of the relationship between individuals and society in the sense that society "produces individuals who create society, in a continuous dialectic". Bhaskar (ibid. 42) argues that this theory is seriously misleading, since it encourages "a voluntaristic individualism with respect to our understanding of social structure and [...] a mechanistic determinism with respect to our understanding of people." He also points out that, in contrast to Berger and Luckmann's model, society and people are not "two moments of the same process", but rather "radically different kinds of things" (ibid. 42). One reason for his ontological distinction between society and people is that social structures, according to Bhaskar (ibid. 42-43), always pre-exist the intentional actions of individuals. He goes on to contend that his own *transformational model of social activity* solves the alleged difficulties of Berger and Luckmann (ibid. 43-47). It is worth noting here that Margaret Archer (1995, 93-134) has also criticized "central conflationism" in social theory (e.g. Anthony Giddens' structuration theory) for its failure to separate two basic strata of social reality, which are agency and social structures. Her argument also relies heavily on the view that social structures always pre-exist the intentional actions of individuals.

Rather than judge whether or not Bhaskar's criticism of Berger and Luckmann's theory is valid, I suggest that the alleged problem regarding the relationship between individuals and society or, alternatively, agency and structure might not be conclusively solvable at the level of abstract ontological argumentation. This point can be supported by referring to the seemingly endless discussions in social theory, which are devoted to solving this particular problem. One explanation for the inconclusiveness of this kind of debate seems to be that many ambiguous and ill-defined concepts are often deployed, such as agency, social structure, social relation, society, pre-existence, emergence and determinism. It would also appear that the proponents of different positions end up talking past each other, using the same terms in different ways. Furthermore, these discussions tacitly deal with difficult and age-old philosophical problems, such as the relationship between determinism and free-will, without using the concepts and theories that are developed in current philosophical discussions. Hence, from the philosophical perspective, this kind of discussion might occasionally appear rather opaque. In the following articles I try to analyze and

clarify the meanings and presuppositions of some of the concepts mentioned above (for a similar attempt see Elder-Vass 2005, 2007a, 2007b).

Here I would like to suggest, however, that instead of remaining at the level of abstract philosophical ontology, a better way to handle this and other issues of social ontology might be to stick closer to concrete social entities and empirical social research. From this perspective, it ought to be possible to conduct case-studies on the pressing issues in social ontology by means of examining the ontological presuppositions of the empirically successful middle-range social scientific theories and practices of empirical social research. This kind of case study might also provide a fruitful starting point in developing more abstract theories in social ontology. I have to admit, however, that evaluating the empirical successfulness of social scientific theories and practices may present difficulties, since the criteria that are currently used in empirical evaluation are significantly diverse in different “paradigms” of social research. Some of these points are elaborated in the first and second article.

In addition to Berger and Luckmann’s influential work, the intellectual roots of the current social constructionist movement also include traditions of symbolic interactionism, ethnomethodology and post-structuralism (Burr 1995, 9-14; see also Gergen 2001). Since the publication of Berger and Luckmann’s book, the social constructionism movement has broadened and diversified remarkably. The philosophical and methodological content of current social constructionism has therefore become very difficult to characterize, since it can be said that there currently exist many kinds of social constructionist approaches in different fields of social inquiry. Not all of today’s social constructionists, for example, would accept Berger and Luckmann’s phenomenological starting point, since some of them come from a post-structuralist tradition, which is at odds with phenomenological sociology. For reasons of this kind it is impossible to provide a list of just such essential theoretical and methodological views that would define the term ‘social constructionism’. As Vivien Burr (1999, 2) suggests, instead of trying to construct of a real definition of the term ‘social constructionism’, it may prove more useful to think that there are many traditions of social constructionisms, which bear only, to borrow Ludwig Wittgenstein’s term, a family resemblance of each other.

In the following, I will compare certain social constructionist views with the position of critical realism. I have decided to include rather detailed comparisons of these “paradigms” in this introduction for three reasons: Firstly, social constructionism is not discussed in the following articles in detail. Secondly, social constructionism poses some interesting challenges to critical realism and social scientific realism in general, which are currently debated vigorously in the methodology of the social sciences. Thirdly, this comparison extends and deepens my previous account of critical realism.

I use social psychologist Vivien Burr’s influential book *Introduction to Social Constructionism* in my general characterization of some of the views presented by social constructionists. I have chosen this book due to the fact that

it has been widely read by social scientists and it also contains many views and shortcomings that seem to be typical to social constructionist texts. To deepen the comparison between critical realism and social constructionism, I also employ some ideas that are put forth by philosopher Ian Hacking in his book *The Social Construction of What?* Here and there I also refer to works of other social constructionists and writers whose views have inspired social constructionists.

Burr separates four “key assumptions” of social constructionism. She suggests that the following key assumptions are something like a list of “things you absolutely have to believe in order to be a social constructionist” (Burr 1995, 3), even though they do not comprise a definition of social constructionism:

1. A critical stance towards taken-for-granted knowledge
2. Historical and cultural specificity [of the ways of understanding the world]
3. Knowledge is sustained by social processes
4. Knowledge and social action go together. (ibid. 3-5.)

The term ‘knowledge’, which is used in these assumptions, is understood as referring to both everyday knowledge and scientific knowledge (or rather what is taken as scientific knowledge by people called scientists). Burr (ibid. 6) and many other social constructionists question a strict distinction between social scientific and everyday knowledge. They also commonly reject the traditional philosophical definitions of the concept of knowledge.

In my assessment, most critical realists would accept all of these key assumptions of social constructionism – or at least some of their interpretations. The first assumption is built-in in a critical realist conception of the sciences, since the position of epistemological critical realism denies that our direct perceptions provide us with infallible knowledge of the world and holds that scientific theories usually question some of our taken-for-granted beliefs. Nothing in critical realism prevents one also being critical towards taken-for-granted-knowledge in the context of everyday life. Critical realists can even argue that the fact that one might be mistaken on his/her taken-for-granted beliefs presupposes that there is something about which he/she is mistaken. This point, in turn, provides an argument (at least) for a minimal form of ontological realism. In any case, both social constructionists and critical realists reject naïve empiricism.

A moderate version of the second assumption can also be accepted by critical realists, since they recognize the variety of cultural beliefs and conceptual schemes. They also accept the existence of the partial semantic incommensurability of different conceptual schemes, even though they deny such forms of judgmental relativism, which reject the possibility of the rational comparison of these schemes (Bhaskar 1986, 70-93; Sayer 2000). Hence, if the ways of understanding the world are taken to be conceptual schemes and historical and cultural specificity is not taken to imply a *total* incommensurability (or incomparability), then the second assumption is perfectly acceptable to critical realists. It is worthwhile pointing out that in his

later writings Thomas Kuhn (2000), who introduced with Paul Feyerabend the concept of incommensurability to methodological discussion, rejected the view according to which the incommensurability of languages can be total and that partial semantic incommensurability of theories implies the impossibility of comparing them rationally.

The essentially social nature of knowledge and the central role of language and action in knowledge acquisition are also readily admitted by critical realists (Bhaskar 1978; Sayer 1992). As was earlier stated, Bhaskar conceives the production of scientific knowledge as a work process in which scientists use available facts, concepts, theories, methods, instruments etc. in the social production of new scientific knowledge. Critical realists would nevertheless add to the third assumption that, along with social and linguistic interaction between scientists, there must be interaction between scientists and their objects of knowledge. Otherwise, socially produced scientific knowledge cannot ever be about real objects. By using Bhaskar's (1978, 21) terms, it can be said that these two dimensions of scientific work comprise transitive and intransitive objects of scientific knowledge. Hence, the third and fourth assumptions also fit the critical realist view of scientific knowledge.

When applied to everyday knowledge, the third and fourth assumptions are both open to different interpretations. First of all, the concept of everyday knowledge can be understood in different ways. Many critical realists would claim that certain embodied dispositions, capacities and skills of human beings are non-social in nature (Archer 2000; cf. Manicas 2006, 43-52), but it is not clear whether they should be counted as knowledge. If the concept of knowledge is conceived of as referring solely to propositional knowledge, which can be always presented by using language, then in my view critical realists would admit that everyday-knowledge is also sustained by social process.

Critical realists hold that individuals, who are engaged in social action, possess some beliefs about the social practices and structures in which they participate. Critical realists nevertheless deny that agents' conceptions of what they are doing in their social activities have to be incorrigible in the sense that they cannot be criticized by social scientists. In order to criticize the concepts and beliefs of agents, critical realists argue, social scientists must be able to show that agents' conceptions are one-sided or ideologically distorted. They therefore hold that adequate social scientific theories should correct the beliefs of agents insofar as these beliefs are ideologically or otherwise distorted. These views are embedded in Bhaskar's (1979, 1986) transformational model of social activity and his notion of explanatory critique. It seems to me that many social constructionists also implicitly accept the corrigibility of the views of agents under study when they are carrying out social research, even though they occasionally belittle the significance of the results of their studies by saying that they are only subjective views with no claim to epistemological authority over any other view (cf. Burr 1995, 161).

Hence, at first glance, Burr's list of the key assumptions of social constructionism does not seem to be incompatible with critical realism. This

nevertheless is not the whole story, since, in addition to the previous epistemic ideas, many social constructionists also tend to present stronger ontological claims about the socially or discursively constructed nature of reality (Burr 1995). They are also prone to interpret the above assumptions in a more radical way compared to their critical realist interpretations (Gergen 2001). Some social constructionists claim, for example, that the objects of the natural sciences, such as quarks, HIV-viruses, animals and human bodies are social constructions (for a critical evaluation of the some claims made by social constructionist see Hacking 1999). Furthermore, social constructionists not only deny the validity of the correspondence theory of truth, but occasionally they also seem to reject all of the normative accounts of the concepts of truth and rationality and to conceive the uses of these notions in social life exclusively as functions of power (Burr 1995, 5-9; Gergen 2001, 12-13, 26, 28-29, 170-171). These kinds of views are often inspired by Michel Foucault's work. At the methodological level, many social constructionists also tend to deny the viability of causal explanations in the social sciences and prefer different kinds of discursive methods such as discourse analysis.

Critical realists, in turn, are happy to acknowledge that at least some social entities are social constructions in some sense, but they also seek to emphasize that social entities are ontologically rooted in material reality and that in many cases they contain an ontologically irreducible material dimension (Sayer 2000). Critical realists nevertheless forcefully deny that objects of natural sciences are social constructions in the sense that their existence is somehow dependent on the scientific statements and theories, which are socially produced by scientists (Bhaskar 1978). Hence, as has been already pointed out, critical realists hold that it does not follow from the fact that because natural scientific knowledge is socially produced (in the materialist sense of the term) that the objects of natural scientific knowledge are also social constructions. Ted Benton (2001) has also argued that, given our current ecological crisis, a denial of the existence of extra-discursive nature by certain social constructionists tends to marginalize the role of the social sciences in current environmental research and in attempts to develop an ecologically more sustainable society. As I have argued above, critical realists also need some kind of normative account of the concept of truth (and rationality), and, therefore, they cannot accept a view according to which the only function of the concepts of truth and rationality is to legitimate the prevailing power relations (see also Sayer 2000). As was also already pointed out, critical realists hold that social scientific research should aim at theories which explain causally one or more social phenomenon, although this does not mean that they reject the employment of discursive methods in social scientific research. On the contrary, some critical realists have sought to combine critical realism and discursive methods (see Joseph & Roberts 2003).

More detailed comparisons between critical realism and social constructionism become difficult, as the philosophical and methodological positions of many social constructionists are notoriously ambiguous. In social constructionist literature, epistemological claims are not usually separated clearly

from ontological claims. Many writers also tend to use ambiguous terms, such as 'construction' and 'discourse', without specifying their meanings. This causes problems, since, for example, the term 'construction' can refer either to the process or the product of that process. It might also denote either the act of material construction of a certain object or the construction of a certain idea of a certain object by naming or categorizing this object. If these different senses of the term 'construction' are not separated from each other, it is very difficult to understand what is meant by a claim that something is socially 'constructed' (see Hacking 1999 35-62). Furthermore, many social constructionists tend to equate realism with naïve empiricism, even though, as was argued above, both critical realists and social constructionists reject naïve empiricism. Despite these problems, I would like to address further issues regarding notions of the categorical structure of reality, essentialism and social construction. In my view, notwithstanding their occasional conceptual opaqueness, social constructionist studies have succeeded in pointing out an important social phenomenon, which has been largely neglected by critical realists.

Bhaskar argues that the world in itself is categorically structured at the level of Kantian basic categories. He holds that it is possible to acquire abstract *synthetic a priori* knowledge of this basic categorical structure of the world by means of using a method of transcendental argumentation which is interpreted in a more realistic and social way than that employed in Kant's own writings (Bhaskar 1978, 259; 1979, 7-8). For example, Bhaskar (1978, 33-36) argues that by means of the transcendental analysis of scientific experimentation, we arrive at the conclusion that, given that scientific practices exist, causal laws (or mechanisms) must be categorically distinct and ontologically independent from actual events. This view seems to presuppose that there can be only one basic categorical structure of reality which is not socially constructed. Note that this position includes stronger metaphysical assumptions than those advocated by many current scientific realists, such as Searle (1995), Niiniluoto (1999) and Wimsatt (2007). Bhaskar's view that it is possible to acquire *synthetic a priori* knowledge of the categorical structure of reality does not fit very well with his doctrine of epistemic relativism (see also Cruickshank 2004). I will return to this issue in the first article.

Social constructionists commonly hold (contra Bhaskar) that a categorical structure of reality does not exist independently of our historically and culturally relative discourses, which are themselves socially constructed (e.g. Burr 1995, 7). Reality is rather structured in different discourses, which may be historically and culturally specific and more or less incommensurable with each other. Social constructionists might also hold that in addition to these socio-linguistically constructed discourses or conceptual schemes, there also exist Kantian things-in-themselves, which cannot ever be the objects of our knowledge. This kind of social constructionism resembles culturally and historically relativized Kantian transcendental idealism in the sense that universal Kantian categories of understanding are interpreted as being historically changing and culturally specific. It seems to me that Rom Harré's (1990) position in some of his more

recent work resembles this kind of socio-historical Kantianism. Note that this latter view is ontologically realist, since it holds that things-in-themselves exist independently of our discourses and knowledge.

Critical realists and social constructionist positions regarding essentialism in social ontology are also different, since many critical realists advocate at least a moderate version of essentialism (Sayer 1997) while social constructionists are usually anti-essentialists or nominalists. Burr (1995, 5), for example, writes that "Since the social world, including ourselves as people, is the product of social processes, it follows that there cannot be any given, determined nature of the world or people. There are no 'essences' inside things or people that make them what they are." Critical realists, in contrast, hold that generative social structures, such as the capitalist mode of production, bureaucracy or patriarchy, are comprised as essential relations between social positions or positioned practices (Bhaskar 1979, Sayer 1997). They do not claim, however, that these kinds of essentialist social structures determine all social phenomena nor do they hold that they are trans-historical and impossible to change. They also emphasize that some social entities, such as races and national identities, do not have essences (Sayer 1997; see also Manicas 2006, 46-49). Critical realists might also admit that essentialist social structures can be said to be socially constructed in a materialistic sense of the term, even though they deny that social structures are mere linguistic constructions. Some of them also hold that all human beings share some essential emergent human powers, such as our capacity to learn and use language, which have developed as a result of our evolutionary history, even though they admit that these powers are not immutable and that their uses are culturally specific (Archer 2000; Sayer 1997; Manicas 2006, 43-46). Hence the critical realist concepts of essentialist social structure and emergent human power are different from the concept of "transhistorical and immutable essence", which is often criticized by social constructionists (for a useful discussion of the relationship between critical realism and social constructionism from the point of view of essentialism see Sayer 1997).

Occasionally, social constructionists also claim that all classifications, including social scientific classifications, are totally arbitrary and that the prevailing relations of social power are the only factors that determine what classifications are used in certain situations (Burr 1995, 41-44). This appears to be an extreme position and most critical realists do not find it plausible, since it is highly problematic to claim that relations of social power determine exhaustively what "paradigms" become dominant in the social sciences and what results of empirical studies are accepted (Sayer 2000, 49). Not all social constructionists accept such an extreme form of anti-essentialism, since, for example, Harré has written that "All human beings have various generic capacities to acquire skills, which, though they differ in their specific forms from tribe to tribe, are nevertheless of the same general kind. Most important of all these is the capacity to acquire and use language" (Harré 1993, 3). He also holds that "there could hardly be linguistic interchanges in the absence of interpersonal trust" (ibid. 3-4) and that there exists a "universal tendency of

human beings to rank themselves hierarchically” (ibid. 4). It seems to me that the position of the social constructionist becomes incoherent if it includes such an extreme form of anti-essentialism as is suggested by Burr, since the majority of claims presented by social constructionists presuppose that all human beings are language users, which is a claim concerning the essential nature – or at least species-specific properties – of human beings. As I suggest in the third article, it would be fruitful to regard questions as to whether essentialistically understood human and social kinds exist as empirical.

Now, if we consider studies conducted by social constructionists at a more local level, then the question becomes: How should we interpret claims that a particular phenomenon X is socially constructed? What is the point in trying to show, for example, that childhood, gender, emotions, women refugees or technological systems are socially constructed? Ian Hacking (1999, 6) argues that social constructionists usually aim at showing that the specific X under study, which is largely taken for granted by most people, is not inevitable, since it could be different or it need not exist at all. Some social constructionists go further and assume that “X is quite bad” and that “we would be much better off if X were done away with, or at least radically transformed” (ibid. 6). From this perspective, social constructionist studies can be seen as liberating insofar as they succeed in showing that some oppressing X, which was thought to be inevitable, can in fact be changed or eliminated. As Burr (1995, 162) also acknowledges, this kind of study may provoke political action in oppressed people who consequently seek to change their situation (see also Gergen 2001, 8).

Do these putative aims of social constructionist studies differ radically from critical realist studies? I think not. As was already pointed out, the aim of explanatory critiques presented by critical realists is also to promote human emancipation, which “consists in the *transformation [...] from an unwanted and unneeded to a wanted and needed source of determination*” (Bhaskar 1986, 171). Hence, explanatory critiques also aim at promoting collective political action by and on behalf of the oppressed, which strives at changing the unwanted and unneeded social structures to non-oppressive social structures. So it would seem that critical realists view their explanatory critiques as being just as liberating as social constructionists would conceive their own claims to be, on the socially constructed nature of X. The ontological presuppositions behind their views are nevertheless different, since the doctrine of explanatory critique ontologically presupposes the existence of embodied human beings and causally efficacious social structures, which cannot be reduced to discourses. These ontological views are denied by many social constructionists.

Instead of studying causally efficacious social structures, social constructionists in their empirical studies tend more to pay attention to discourses and classifications of people and to trace the different effects of these discourses and classifications. For the sake of simplicity, I will employ the term ‘classification’ here, although the term ‘discourse’ is more widely used in social constructionist studies. One reason for their interest in classifications is that social constructionists commonly tend to emphasize that many classifications of

human beings are oppressive in the sense that they may function as a legitimation of the unjust or cruel treatment of a certain group of people. Examples are not difficult to find, since racism, sexism and other forms of discrimination unfortunately are still around us.

However, this perspective on classifications has revealed an important social phenomenon, since, as Hacking (1999, 31) has pointed out, "Ways of classifying human beings interact with the human beings who are classified". This, Hacking suggests, is for at least three reasons: Firstly, people either adopt the concepts and ideas provided by classifications in their thinking or they reject these concepts and ideas. Hence, they might accept a certain classification as a part of their self-understanding and begin to act according to the expectations that are embedded in this classification. Secondly, our acts, insofar as they are intentional acts in the philosophical sense, are always done under some description and, therefore, currently available descriptions might provide new ways of acting or constraining the possibilities for action. Thirdly, classifications exist always in a wider context, which includes institutions, practices and material interactions between people, and these affect how people are treated in different social situations. For these reasons, Hacking (*ibid.* 103-106) calls classifications of human beings as *interactive kinds*, while the classifications of the objects of natural sciences are usually *indifferent kinds*, since they do not have effects on the self-descriptions of their referents. Note that Hacking's usage of the term 'kind' here differs from its critical realist usage, since for critical realists the term 'kind' refers to a purely ontological category, whereas Hacking's usage has both epistemic and ontological connotations.

Most critical realists would be ready to accept the view that classifications of human beings are interactive in Hacking's sense, even though so far these same critical realists have not paid much attention to the causal interaction between these kinds of classification practices and the people to whom they refer. The problem with the views of many social constructionists is that they are not clear as to what they mean when they state that "X is socially constructed" (see also Hacking 1999). Those social constructionists, who are influenced by structuralist and post-structuralist traditions, often give the impression that social reality is entirely constituted by discourses and, consequently, they deny the existence of non-discursive aspects of social reality. This view is rightly criticized by some critical realists (Sayer 2000), since linguistic discourses or classifications by themselves do nothing. In order to be causally effective, classifications must be employed either by the people who are the objects of these classifications, or by the people who interact with the objects of these classifications in the context of different kinds of practices, institutions and social systems. In other words, classifications conceived as abstract conceptual systems are not causal agents, since only their uses in different social contexts can be causally effective. Sayer (1997) is also right in pointing out that, contrary to suggestions of some social constructionists, not all classifications work, even if they have been implemented by the powers that be, since their efficacy is usually partially dependent on extra-discursive

phenomena. It is worth emphasizing that these remarks do not amount to a denial of the fact that uses of language are not usually under entirely conscious control by their users. Some social constructionists try to take account of the above points by stretching the concept of discourse to include material social practices (Alasuutari 2006, 86), but it remains unclear what is achieved by renaming material practices as discourses.

Extremist social constructionists, such as those who are inspired by the views of Jacques Derrida and Jean Baudrillard, tend to claim that the so-called play of difference renders all meanings as constantly fluctuating and changing. From this perspective language is thought to be self-referential and, therefore, all distinctions between meanings of words (or sentences) and their referents become impossible. Andrew Sayer (2000, 39) has countered this view by pointing out that many of our classifications are comparatively stable and that:

Without realist analysis of signification practices that acknowledges the independence of referents and their properties and interrelations from discourse – absolute in the case of inanimate objects, relative in the case of human social phenomena – the success and stability of reference in social practice is unintelligible.

If all discourses and classification were constantly fluctuating, then this kind of stability, according to Sayer, would remain unintelligible. This point is valid. Critical realists have nevertheless not yet developed “realist analysis of signification practices” very far, even though some of them have tried to combine critical realism with Charles S. Peirce’s realistic semiotics (Nellhouse 1998) and to Norman Fairclough’s critical discourse analysis (Fairclough, Jessop & Sayer 2003).

To conclude: Despite the ambiguities of some of their views, social constructionists have presented a real challenge to critical realism, since critical realists have not until recently paid much attention to the role of language in social reality. It can also be argued that critical realists have one-sidedly focused on the descriptive role of language in social life, while largely omitting its performative and expressive functions, which are emphasized by many social constructionists. Due to the fact that many social scientific classifications seem to be interactive kinds in Hackings sense, I doubt whether the essentialist concept of social structure, which is advocated by critical realists, is very useful in the social sciences. In my view, critical realists are nevertheless right in criticizing many social constructionists for their explicit or implicit denial of the material aspect of social and non-social reality. Critical realists have also emphasized, rightly in my view, that the descriptive function of language cannot be reduced to its performative and expressive functions – in contrast to the assumptions of some social constructionists. It is also important to point out, as critical realists have done, that changes in words or ways of speaking do not alone guarantee changes in material social practices. In any case, it seems to me that in order to make sense of and evaluate many of the claims presented by social constructionists and to develop critical realism further, some kind of ontologically realist and dynamically emergent materialist theory of the role language and signification in social life is needed. Further discussion of the specific nature of such a theory is beyond the scope of this study.

1.7 Critical realism and the social sciences

This final chapter of the introduction seeks to address certain challenges faced by critical realism when applied to the social sciences. Scientific realists traditionally define the doctrine of ontological realism in terms of the existence of a mind-independent world (Niiniluoto 1999). This definition of ontological realism leads to problems when it is applied to social realm, since it is commonly believed that many social entities are ontologically dependent on the mental states of human beings. For example a social relation of friendship between two persons is ontologically dependent on certain beliefs, emotions and attitudes that these persons exhibit towards each other. Hence, these kinds of relationships are not mind-independent. Similar problems are faced in considering more complex social objects such as institutions, social structures and social systems and also objects of psychology. Should we then refrain from applying a doctrine of scientific realism to the social sciences and psychology?

The critical realists' answer is negative. They argue that social and psychological entities are also ontologically real in the sense that they possess emergent causal powers and, hence, can be the objects of scientific research. I think that the best way to handle the previous problem is to redefine, as I have already tacitly done, ontological realism in the context of the social sciences as a view according to which objects of social scientific research exist independently of social scientific inquiry and social scientists' representations of them (Bhaskar 1986, 5; Mäki 2005). The concept of representation should be understood here in a very broad way as comprising not only scientists' mental representations but also their socially produced statements, theories, models, diagrams, pictures, graphs, photographs etc., which can be publicly evaluated. This definition emphasizes the term 'scientific' in scientific realism, since it uses the terms 'social scientific inquiry' and 'social scientist'. It also evades the tricky philosophical problems related to mind. This is an advantage when this definition is compared to the traditional definition, which uses the term 'mental state'. Furthermore, ontological realism is in principle neutral regarding the ontological issues concerning materialist or physicalist interpretation of mental states. In other words, it is possible to be an ontological realist regarding psychological or social objects, while holding that these objects are not material, even though most scientific realists tend to advocate some version of materialist or physicalist ontology.

Now, the previous definition of ontological realism resolves at least some of the problems that are associated with the application of traditional definitions of scientific realism to the social sciences (and psychology). The key to this definition is to distinguish social scientists' research practices and representations from practices and representations of the human agents who are the object of their studies. To use the previous example, we can say that a particular relation of friendship which is studied by a social scientist is not usually ontologically dependent on the mental representations or the actions of

the social scientist who is studying this relation. This relation is, however, ontologically dependent on certain mental representations and actions of both parties in the friendship. In other words social scientists seldom study social relationships in which they are themselves engaged. From this perspective ontological realism can also in principle be applied to mental entities, due to the fact that the existence of the mental states of the human beings under study is not dependent on social scientists' or psychologists' representations of them on their research practices. This point can easily be expanded to more complex social entities that can be studied in the social sciences.

A possible objection concerning the application of ontological realism to the social sciences concerns the way in which social scientific knowledge is continuously used in modifying social reality. For example, it is widely acknowledged that Marxism-Leninism, Neo-classical economic theory and Keynesianism have – for better or worse – shaped in profound ways the economic systems in different countries during the previous century mostly via the actions of politicians and economists. The terms 'self-fulfilling prophecy' and 'self-destroying prophecy' refer to similar phenomena in which social scientific knowledge moulds the social reality via the actions of people. For example, predictions which are presented by economists in the media may affect the behavior of consumers in such a way that these predictions become true. Can we say any longer that economic systems exist independently of social scientists' representations of them? As social constructionists have emphasized, social scientific classifications of people also affect the objects of these classifications. For example, social scientific classifications of people into different social classes have the capacity to modify people's self-understanding and actions, should these classifications be presented to them. Certain groups may become, for example, class-conscious and begin to act collectively after having read social scientists' studies on the current class-structure. Can we still say that social classes exist independently of social scientists' representations of them?

Bhaskar (1979, 60) seeks to answer this kind of question by separating the concepts of *causal interdependency* and *existential intransitivity*. His argument can be presented as follows: Even though currently existing capitalist and socialist economies have both been historically produced and are perhaps currently reproduced by using social scientific ideas that were developed within earlier social scientific theories and empirical studies, once these economies have emerged, they are possible objects of social scientific research, since they are not existentially dependent on the current processes of investigation that seek to produce new knowledge about them. It is nevertheless possible that, once these current studies are published, the social scientific knowledge produced by them is, in turn, applied in social practices which causally reproduce or transform these economies. This possibility is, however, quite compatible with the existential intransitivity of the objects of any particular social scientific study that is currently conducted. Even if both social scientists and the agents studied share the same concepts, it does not follow that social scientists by means of doing research create the concepts of the agents under study. (For a similar

argument see Mäki 2005, 245-246.) Similar arguments can be presented regarding scientific classifications of people.

Nothing prevents social scientists from also constructing such “second-order” theories, which seek to describe and explain historical interactions between “first-order” social scientific theories and their effects in a wider social context. This kind of “reflexive” approach has become rather common in today’s social sciences and occasionally it is thought to be incompatible with ontological realism. From the point of view of the previously defined ontological realism, it can be nevertheless argued that the objects of this kind of second-order theory can also be interpreted as existing independently of this particular theory, since this theory does not create the first-order theories which are its objects or any of the social interactions in which these first-order theories play a role. Otherwise these kinds of second-order theory would seem to be rather pointless. In order to construct these kinds of theory, it might be nevertheless fruitful to employ a methodologically relativist view that assumes impartiality regarding the truth-values of the first-order theories under investigation (for a similar view see Kiikeri & Ylikoski 2004, 208-215). Even Michel Foucault’s theories of discursive formations or *dispositifs* may be fruitfully re-interpreted as this kind of second-order theory, even though his own methodological views are not entirely compatible with this re-interpretation (for a similar realist interpretation of Foucault see Pearce & Woodwiss, 2001).

Ontological realism is also compatible with an applied social research in which social scientists seek to transform the social entities, such as organizations, which they are currently studying, since social scientists do not create or change these organizations solely by studying them. It might be also argued that the successful transformation of any given organization is possible only insofar as social scientists studying it are able to produce true or at least approximately true knowledge of the causal relations which prevail in this organization, since otherwise their suggestions are prone to cause only harm to the workings of the organization. Some forms of hermeneutical, phenomenological and ethnomethodological social studies may fail to meet the requirement of the existential intransitivity of their objects, but this rather questions their status as social *scientific* studies than refutes the previously defined version of ontological scientific realism.

In this chapter I have so far mostly considered the application of ontological critical realism to the social sciences. The previous rather detailed discussion on this issue is justified due to the fact that Bhaskar (1986, 6) writes that “realism is not a theory of knowledge and truth, but of being – although as such it is bound to possess epistemological implications.” It is nevertheless worth noting that there are other philosophers of science, who may well disagree with this view. For example, Ilkka Niiniluoto (1999) conceives realism not exclusively as an ontological doctrine but also as a semantical, epistemological, axiological, methodological and ethical position. Niiniluoto therefore interprets realism in a much broader sense than Bhaskar.

In my view any comprehensive scientific realist position in the social sciences should also include, in addition to social ontology, an elaborated epistemology and methodology of the social sciences. Actually the previous discussion has already dealt with the epistemological question regarding the possibility of interpreting social scientific representations in a realist way. I also largely agree with Bhaskar (1986) that theories of being possess epistemological implications and epistemologies include ontological presuppositions. It is nevertheless important to bear in mind that realist social ontology does not solve all of our epistemological and methodological problems, although it may provide some guidance as to where to look for solutions. Moreover, as I have already suggested, abstract social ontologies should be also evaluated from the perspective of empirical research. For these reasons it appears that realist epistemological and methodological issues should be investigated also for their own sake and not simply as implications of realist social ontological views. Moreover, successful middle-range social scientific theories and empirical practices of social research should also be taken into account when critical realist social ontology is developed further. It seems to me that many critical realists hold an overly simplified view of the relation between social ontology, methodology and empirical studies.

2 SUMMARY OF THE ARTICLES

2.1 The Trouble with Transcendental Arguments

This article compares the transcendental arguments of Roy Bhaskar and Immanuel Kant. It points out that Bhaskar's way of using transcendental arguments differ from Kant's, since the premises of his arguments comprise descriptions of certain generally acknowledged social-historical scientific practices, while the premises of Kant's arguments in his *Critique of Pure Reason* consist of descriptions of a certain allegedly undeniable and universal features of our cognitive experience. The article also describes how Kant's transcendental arguments are inseparably tied to his doctrine of transcendental idealism, which is incompatible with Bhaskar's transcendental realism. The previous fact, it is argued, vitiates Bhaskar's attempt to draw realistically interpreted ontological conclusions by means of Kantian transcendental arguments. It is also pointed out that Bhaskar's uses of the Kantian terminology are problematic.

It is further argued that it may be possible to re-interpret Bhaskar's arguments from a meta-philosophically naturalist perspective, avoiding the problems that vitiate Bhaskar's employment of Kantian transcendental arguments. From this perspective, arguments for transcendental realist ontology are conceived as fallible inferences to the best explanation of certain scientific practices, described by means of using the results of empirical science studies. In addition, the conclusions of these kinds of arguments should be also compatible with the theoretical descriptions of the entities postulated by empirically well-confirmed scientific theories. The article describes how this kind of naturalization of Bhaskar's arguments would not only question some aspects of his descriptions of scientific practices but would also require some substantial changes to his transcendental realist ontology.

It should be noted here that the doctrine of meta-philosophical naturalism does not necessarily require one to commit to such methodological naturalism (or monism) according to which the same method is used in both natural and

social sciences, nor does it require acceptance of the scientific view that the only proper sciences are natural sciences or physics. In contrast to scientism and strict methodological naturalism, I believe that the most fruitful way to develop naturalistic ontology is to include human and social sciences in the analysis.

2.2 How useful are Transcendental Arguments for Critical Realist Ontology?

This paper is a response to Jamie Morgan's (2005) review essay in which he seeks to combine Kenneth R. Westphal's (2004) realist re-interpretation of Kant's transcendental arguments and Roy Bhaskar's transcendental realism. Morgan also suggests that this re-interpretation can be used in addressing the critique of Bhaskar's transcendental arguments as presented in my first article. Furthermore, Morgan criticizes the first article *inter alia* by claiming that the arguments presented in it presuppose such "a sharp dichotomy between the inquiring subject and an objective world" (Morgan 2005, 442), which renders subject and object as "distinct realities" (ibid 442). He also claims that the naturalized version of scientific realism, as sketched in the first article, amounts to a reduction of philosophy to science and, hence, such philosophy cannot add anything substantial to sciences (ibid, 444) and it has to accept the infallibility of "scientific self-understanding" (ibid. 445).

This article seeks to address Morgan's suggestion and criticisms. It is shown that Morgan's combination of Bhaskar's transcendental realism to Westphal's realist re-reading of Kant is not viable, since the premises and results of their arguments are different. Westphal's premises comprise certain universal features of everyday experience while Bhaskar's premises refer to generally acknowledged scientific practices. It follows from this that Westphal's transcendental arguments are insufficient for justification of transcendental realist ontology, which, according to Bhaskar's view, is a necessary condition of possibility (or intelligibility) of current natural scientific practices. It is also shown that Westphal's arguments for epistemological realism and mental content externalism are largely irrelevant for the justification of Bhaskar's ontological version of transcendental realism. The paper also deals with some problems regarding the uses of the transcendental method of argumentation in a critical realist social ontology. It is argued that critical realist social ontology cannot be derived by means of transcendental arguments starting from allegedly universally accepted features of intentional social action, due to the fact that descriptions of the nature of the intentional social actions that are proposed in different theoretical traditions in the social sciences differ from each other. The paper suggests that also in the context of critical realist social ontology the transcendental method of argumentation should be replaced with a more naturalistic method of argumentation which takes current practices of empirical social research more seriously into account.

Furthermore, it is pointed out that (contra Morgans' claim) the arguments presented in the first article do not presuppose such a distinction between subject and object, which separates them into distinct realities. It is also argued that realistically interpreted meta-philosophical naturalism does not necessarily lead to reduction of philosophy to science and uncritical acceptance of all views that deem themselves scientific. This point is justified by noting that naturalist philosophers of science have presented many interesting contributions to epistemological and ontological discussions in the context of certain scientific theories and practices. Their views are usually formulated at a more abstract level than scientific theories and they include criticism toward certain scientific theories and practices.

2.3 Exploring the Concept of Causal Power in a Critical Realist Tradition

This article begins with an analysis and evaluation of the uses of the concept of causal power in the writings of Rom Harré and his associates (Harré & Madden 1975; Harré & Secord 1972). These uses are compared to Bhaskar's interpretation of the concept of causal power. In addition to many similarities between these accounts, such as the essentialist interpretation of causal powers and the application of this concept to human beings and social entities, two important differences are also identified. Firstly, the concept of emergence, which is used by Bhaskar, is missing in Harré's and E.H. Madden's account of causal powers. Secondly, in contrast to Bhaskar's view, Harré and Madden argue that not only the effects of activated causal powers can be empirically observed but also on some occasions activated causal powers. Hence, unlike Bhaskar, Harré and Madden do not locate causal powers to the non-perceivable transcendental realm of being.

The concept of emergence used in Bhaskar and other critical realists' works is shown to be ambiguous. It is also pointed out that the concept of causal power should be analyzed in an anti-essentialist way, due to the fact that essences are rare outside physics and chemistry. Ontological and methodological problems that vitiate Bhaskar's transcendental account of the concept of causal power are also examined. It is shown that methodological implications of this view are problematic, since, if it is accepted that causal powers are always in principle non-perceivable and that the effects of activated causal powers (or tendencies) are inseparably intermingled with each other in open systems, empirical testing of such theories, which refer to transcendental causal powers of entities, becomes impossible – at least outside experimental physics and chemistry. Moreover, it is argued that the applications of the concept of causal power to mental powers, reasons, and social structures in the critical realist social ontology are problematic. The article also strives to show that if mental powers are conceived in a more embodied way and if social

structures are interpreted as structures within concrete social systems, then these problems might be avoided without giving up the concept of mental power and the notion of structural social causation. It is, however, noted that the concept of causal power cannot be plausibly used in conceptualizing structural social causation. The paper contends that it may prove fruitful to stop seeking a single ontological analysis of the concept of causality and to try to construct a more pluralistic notion of causality.

2.4 Bhaskar and Bunge on Social Emergence

This article analyzes and compares the theories of social emergence developed by Roy Bhaskar and Mario Bunge. It is argued that Bhaskar uses the concept of emergent power in three different senses, which are termed as compositional, depth-relational and global-level concepts of emergent power. It is shown that they include incompatible presuppositions and, therefore, vitiate Bhaskar's account of emergence. In particular, the concept of depth-relational emergence, which is employed in Bhaskar's social ontology, is shown to be problematic.

Mario Bunge's (1996, 2003) systemic account of social emergence is then analyzed. It is concluded that even though Bunge's compositional concept of emergence is clearer than Bhaskar's, it is too broad and analytically imprecise for the purposes of an emergentist social ontology. It is argued that Bunge's systemic account of social emergence can be developed further by using William Wimsatt's (2007) gradual approach to emergent phenomena and his four conditions of aggregativity of a systemic property. It is shown that these conditions provide useful conceptual tools for clarifying and investigating different kinds of mechanisms of social emergence and developing stronger varieties of the concept of emergent social property than that indicated in Bunge's definition of this concept.

2.5 Roy Bhaskar's Concept of Social Structure

This article analyzes and evaluates Bhaskar's concept of social structure, which forms a part of his transformational model of social activity. This concept is exemplified by using Karl Marx's theory of the capitalist mode of production. Bhaskar's two *a priori* arguments for his social realism are criticized. Margaret Archer's (1995) proposal as a refinement of this concept is considered, but it is contended that Archer's refinement is vulnerable to a similar criticism as Bhaskar's original account of social structures. It is argued that Bhaskar's account of social structures is internally incoherent and includes problematic essentialist assumptions. Moreover, it is shown that Bhaskar tends to conceive social structures as non-actual internal relations between abstractly conceived

social positions and, consequently, locates social structures to some kind of transcendental realm of being, which is beyond both ordinary and scientific perceptions. This view, it is argued, implies that empirical testing of such social scientific theories that refer to “transcendentally real” social structures becomes impossible insofar as social scientists always have to study open systems in which empirical regularities are not forthcoming.

The paper sketches an alternative account of social structures as relations of interaction between individual agents who function as parts of some concrete social system. This view is influenced by Bunge’s (1996, 1998) systemic social ontology, which is compatible with scientific realism. It is suggested that this interpretation avoids the problems of Bhaskar’s concept and provides a stronger foundation for empirical social research based on the assumptions of scientific realism. It also succeeds in distinguishing collective agents from social classes without collapsing the latter into mere discursive categories. It is also pointed out that without the existence of empirical regularities in social reality, empirical testing of social scientific theories would be impossible.

YHTEENVETO

Analysoin ja arvioin tutkimuksessa yhteiskuntatieteellisen kriittisen realismin perinteen ontologisia ja metodologisia perusteita. Keskityn tarkastelemaan nimenomaan yhteiskuntatieteilijöiden piirissä suosiota saavuttaneen kriittisen realismin versiota, jonka perustajana pidetään brittifilosofi Roy Bhaskaria. Tämä tieteenfilosofinen, metodologinen ja yhteiskuntateoreettinen suuntaus muotoutui 1970-luvun lopulla Isossa-Britanniassa ja on sittemmin saavuttanut näkyvyyttä myös Ison-Britannian rajojen ulkopuolella. Viime vuosina kriittinen realismi on rantautunut entistä vankemmin myös suomalaiseen yhteiskuntatieteelliseen keskusteluun.

Kriittisen realismin kasvavaa suosiota voi pitää eräänlaisena vastareaktiona postmodernismiin, poststrukturalismiin ja sosiaalisen konstruktionismiin suuntauksille, jotka ovat saavuttaneet merkittävän aseman sosiologian metodologisissa ja yhteiskuntateoreettisissa keskusteluissa 1980-luvun lopulta lähtien. Näistä virtauksista kriittisen realismin erottaa ennen kaikkea kolme seikkaa: kunnioitus tieteellistä tutkimusta kohtaan ja kiinnittyminen valistuksen perinteeseen, kausaalisia selityksiä tavoittelevan yhteiskuntatieteellisen tutkimuksen mahdollisuuden puolustaminen ja realistis-materialistinen sosiaaliontologia. Kriittisen realismin voi nähdä myös yhtenä ontologisen ja epistemologisen tieteellisen realismin lajina. Siinä nimittäin sitoudutaan näkemykseen, että tieteellisen tutkimuksen kohteet ovat olemassa niitä koskevasta tiedosta riippumatta ja että niistä on mahdollista saavuttaa tieteellisiä menetelmiä käyttämällä erehtyvistä mutta tarkentuvaa tietoa. Tämän tradition perinteisimmistä muodoista poiketen, kriittisessä realismissa tieteellisen realismin ohjelma ulotetaan luonnontieteiden lisäksi myös yhteiskuntatieteisiin.

Tutkimus koostuu johdannosta ja viidestä julkaistusta artikkelista. Johdannossa esittelen kriittisen realismin keskeiset opit ja suhteutan kriittisen realismin perinteen positivismiin, marxismiin ja sosiaaliseen konstruktionismiin. Käsittelen siinä myös joitain erityisongelmia, joita kohdataan laajennettaessa tieteellinen realismi käsittämään luonnontieteiden lisäksi yhteiskuntatieteet. Nämä ongelmat liittyvät paitsi kielenkäytön rooliin sosiaalisen todellisuuden konstituutiossa myös erilaisiin tapoihin, joilla yhteiskuntatieteellinen tieto välittyy tämän tiedon kohteena olevien toimijoiden käytäntöihin ja tätä kautta osaltaan vaikuttaa vallitsevan sosiaalisen todellisuuden ylläpitämiseen tai muuttamiseen. Puolustan tutkimuksessa yhteiskuntatieteellisen ontologisen realismin lokaalia tulkintaa, jonka mukaan yhteiskuntatieteellisen tiedonmuodostuksen kohteet ovat jokaista yksittäistä tutkimusta tarkastellessa ontologisesti (tai eksistentiaalisesti) riippumattomia tästä nimenomaisesta tutkimuksesta ja sen tuottamasta tiedosta. Tässä Bhaskarin ajatteluun pohjautuvassa realismin tulkinnassa kuitenkin myönnetään, että tarkastelun kohteena olevan yhteiskuntatieteellisen tutkimuksen tuottama tieto voidaan tutkimuksen valmistumisen jälkeen kommunikoida sen kohteena oleville ihmisille ja muille tahoille, jotka toimimalla tämän tiedon perusteella voivat osaltaan kausaalisesti muokata val-

litsevaa sosiaalista todellisuutta. Vallitsevan sosiaalisen todellisuuden onnistuneen muokkaamisen välttämätön, joskaan ei riittävä, ehto on tämän näkemyksen mukaan se, että muutokseen tähtäävillä toimijoilla on käytössään pätevää yhteiskuntatieteellistä tietoa. Tästä näkökulmasta nykyisen sosiaalisen todellisuuden voidaan siis sanoa olevan osittain kausaalisesti riippuvainen yhteiskuntatieteiden tuottamasta tiedosta.

Tutkimuksen kahdessa ensimmäisessä artikkelissa analysoin ja kritisoin transsendentaaliargumentteja, joita Bhaskar ja eräät muut kriittiset realistit (esim. Tony Lawson) käyttävät todellisuuden ontologista rakennetta koskevien väitteidensä perustelussa. Transsendentaaliargumentaation menetelmän kehittäjänä pidetään saksalaisfilosofi Immanuel Kantia, jonka kirjassa *Puhtaan järjen kritiikki* esittämät transsendentaaliset todistukset ja deduktiot koskevat tiedollisen kokemuksen mahdollisuuden välttämättömiä ehtoja. Kant ajatteli että näistä ehdoista pystytään saavuttamaan *a priori* (eli kokemuksesta riippumaton) tietoa siitä syystä, että kaikki kokemuksemme ovat tiettyjen havainnon (tai intuition) muotojen ja ymmärryksen kategorioiden organisoimia. Tämän Kantin transsendentaaliseksi idealismiksi nimeämän näkemyksen mukaan aika ja avaruus ovat puhtaita havainnon muotoja, jotka loogisesti edeltävät kaikkia mahdollisia kokemuksia. Kokemuksiimme jäsentäviä universaaleja ymmärryksen kategorioita ovat puolestaan esimerkiksi kausaalisuus, reaalisuus, ykseys ja mahdollisuus. Kantin transsendentaalisen idealismin näkökulmasta kaikki kokemuksemme ja tieteellinen tietomme kohdistuu aina objekteihin, jotka ovat osittain havainnon muotojemme ja ymmärryksen kategorioidemme konstituioimia. Kokemuksistamme riippumattomista olioista sinänsä (*Dinge an sich*), joiden Kant ajatteli havainnon muotojen ja ymmärryksen kategorioiden lisäksi välttämättä osallistuvan kokemustemme objektien konstituutioon, emme sitä vastoin voi tietää muuta kuin että ne ovat olemassa.

Kantista poiketen, Bhaskar ja muut kriittiset realistit pyrkivät transsendentaaliargumenteillaan oikeuttamaan kokemuksesta riippumattoman todellisuuden (so. olioiden sinänsä) rakennetta koskevia ontologisia väitteitä esittämällä niiden kuvaavan menestyksellisten luonnontieteellisten tutkimuskäytäntöjen (esim. kokeiden tekemien) mahdollisuuden välttämättömiä ehtoja. Lisäksi Bhaskar käyttää transsendentaaliargumentteja sosiaaliantologiassa, jossa niiden premissinä toimii muun muassa ihmisten intentionaalinen (eli tavoitteellinen) toiminta. Kuten voimme huomata, Bhaskarin transsendentaaliargumentit eroavat Kantin argumenteista muun muassa siinä, että niiden premissejä eivät muodosta yksilöllisen kokemuksen universaalit piirteet, vaan menestykselliset luonnontieteelliset tutkimuskäytännöt, jotka ovat luonteeltaan olennaisesti historiallisia ja sosiaalisia, ja intentionaalinen toiminta – tai oikeastaan tietty kuvaus näistä ilmiöistä. Siten Bhaskarin transsendentaaliargumenttien esittämisen ja uskottavuuden edellytyksenä on, että historiallisesti muotoutuneita tieteellisiä tutkimuskäytäntöjä on olemassa ja että ihmiset ovat kykeneviä toimimaan intentionaalisesti. Näistä eroavaisuuksista huolimatta Bhaskar luokittelee transsendentaaliargumenttien johtopäätökset Kantin termein transsendentaalisesti välttämättömiksi *synteettinen a priori* -totuuksiksi, jotka hän kuitenkin suhteellis-

taa tieteellisten tutkimuskäytäntöjen ja intentionaalisen toiminnan olemassa-oloon.

Argumentoin tutkimuksessa, että Bhaskarin pyrkimys oikeuttaa realistisia ontologisia väitteitä kantilaisin transsendentaaliargumentein on ongelmallinen, koska hänen kannattamansa transsendentaalinen realismi on lähtökohdiltaan ristiriidassa kantilaisen transsendentaalisen idealismin kanssa, joka puolestaan sisältyy ennako-oletuksena Kantin transsendentaaliargumentteihin. Lisäksi kyseenalaistan Bhaskarin argumenttien pmissseinä käyttämien luonnontieteellisten tutkimuskäytäntöjen ja intentionaalisen toiminnan kuvausten itsestäänselvyiden ja tuon esiin niiden oikeuttamista koskevia ongelmia. Tarkastelen työssä myös joitain täsmennyksiä ja korjauksia, joita Bhaskar myöhemmissä kirjoituksissaan esittää transsendentaaliargumentaation menetelmäänsä. Nämä liittyvät muun muassa argumenttien pmissien valintaan ja oikeuttamiseen sekä kilpailevien näkemysten immanentin kritiikin painottamiseen transsendentaaliargumentaatiossa. Esitän kuitenkin, että myös näiden täsmennysten ja korjausten pohjalta muotoillut ”naturalisoidut transsendentaaliargumentit” ovat edelleen ongelmallisia. Tämä johtuu muun muassa siitä, että Bhaskar pitää niissä edelleen kiinni ajatuksesta, jonka mukaan argumenttien johtopäätökset olisivat jollain tavalla transsendentaalisesti välttämättömiä totuuksia (erotuksena puhtaasti hypoteettisista väitteistä) tieteen tutkimana todellisuuden ontologisesta rakenteesta.

Ehdotan tutkimuksessa kriittisen realismin ontologian oikeuttamisessa käytettyjen transsendentaaliargumenttien korvaamista naturalistisilla argumenteilla. Luonnostelemani mallin mukaisten naturalististen argumenttien pmissinä toimivat menestyksellisten tieteellisten tutkimuskäytäntöjen erehtyväiset kuvaukset, joiden perustelussa tukeudutaan tieteellisiä tutkimuskäytäntöjä koskevan empiirisen tieteen tutkimuksen tuloksiin. Naturalististen argumenttien johtopäätökset ovat puolestaan todellisuuden rakennetta (tai jotain sen osaa) koskevia erehtyväisiä väitelauseita, joiden ajatellaan kuvaavan tieteellisten tutkimuskäytäntöjen menestyksellisyyden selittämisen kannalta välttämättömiä ehtoja paremmin kuin niiden kanssa kilpailevien ontologisten näkemysten. Näiden väitteiden ei kuitenkaan ajatella olevaan missään mielessä transsendentaalisesti välttämättömiä eikä niiden statusta voi kuvata termillä ”*synteettinen a priori*”. Esitän että tämänkaltaiset argumentit ovat loogiselta rakenteeltaan päätelyitä parhaaseen selitykseen, mikä yhdistää ne moniin tieteellisiin selityksiin. Lisäksi argumentoin, että naturalististen argumenttien johtopäätösten tulee olla yhteensopivia vankkaa empiiristä tukea saavuttaneiden tieteellisten teorioiden ontologisten sitoumusten kanssa. Tarkastelun johtopäätöksenä totean, että tutkimuksessa luonnostelemani naturalistisen argumentaation mallia käyttämällä on mahdollista puolustaa joitain kriittisen realismin ontologian oppeja siten, että vältetään Bhaskarin transsendentaaliargumenttien ongelmat. Tästä huolimatta esitän, että naturalistiseen argumentaatiostrategiaan siirtyminen myös kyseenalaistaa joitain kriittisen realismin ontologiaan sisältyviä näkemyksiä ja käsitteitä, joista osaa kritisoin tutkimuksen muissa artikkeleissa. Lisäksi argumentoin naturalistisen ontologisen argumentaation mahdollistavan sellaisen realistisen ontologian kehittämisen, joka on Bhaskarin kriittistä (tai transsen-

dentaalista) realismia paremmin yhteensopiva tieteellisen tutkimuksen käytäntöjen ja tulosten kanssa.

Kolmas ja neljäs artikkeli käsittelevät kriittisen realismin traditiossa kehitetyt kausaalisen voiman (*causal power*) ja ontologisen emergenssin käsitteitä. Kausaalisen voiman käsitteellä viitataan tieteenfilosofisessa ja metodologisessa keskustelussa konkreettisten yksilöolioiden (*particulars*) rakenteeseen perustuviin kykyihin, kapasiteetteihin, valmiuksiin ja taipumuksiin tuottaa tietyn tyyppisiä vaikutuksia määrätyissä olosuhteissa. Tämä käsite erotetaan usein kausaliteetin regulariteettiteorioista, joissa kausaalisuhteet pyritään palauttamaan toisistaan loogisesti riippumattomien tapahtumatyyppien säännönmukaiseen yhdessä esiintymiseen. Kausaalisesta selittämisestä keskustellessaan kriittiset realistit puhuvat myös generatiivisesta kausaliteetin käsitteestä, jossa empiiriset säännönmukaisuudet tulkitaan niiden alta löytyvien kausaalisten mekanismien tuottamiksi. Heidän näkemyksensä mukaan kausaalisten mekanismien ontologisen perustan muodostavat erilaisten olioiden ja rakenteiden aktivoituneet kausaaliset voimat, joiden vaikutukset saattavat kuitenkin jäädä avoimissa järjestelmissä ilmenemättä aktuaalisten tapahtumien tasolla sellaisissa tilanteissa, joissa muut vaikuttavat mekanismit kumoavat tutkittavan mekanismin vaikutukset. Tämä on huomioitava erityisesti yhteiskuntatieteissä, jotka ovat kriittisten realistien mukaan tuomittuja tutkimaan avoimia järjestelmiä.

Diakronisen emergenssin käsitteellä tarkoitetaan yleensä prosessia, kuten esimerkiksi biologista evoluutiota, kulttuurievoluutiota tai yksikönkehitystä, jonka tuloksena syntyy emergentejä ominaisuuksia omaavia olioita. Synkronisen emergenssin (tai emergentin ominaisuuden) käsite viittaa taas minimaalisen tulkinnan mukaan tietyn entiteetin kokonaisuuden ominaisuuksiin, jotka puuttuvat sen osilta ja jotka eivät ole osien ominaisuuksien resultantteja (tai aggregaatteja). Siten emergenssin käsitteeseen sisältyy ajatus siitä, että kokonaisuudet ovat jotain enemmän kuin vain osiensa summia. Sosiaalisen todellisuuden kohdalla tämä ajatus koskee sosiaalisia rakenteita tai järjestelmiä, joilla ajatellaan olevan ihmisyksilöiden ominaisuuksiin palautumattomia emergentejä ominaisuuksia (esim. normit, roolit, instituutiot, koheesio ja työnjako). Kriittisessä realismissa emergenssin käsitteeseen liitetään myös ajatus emergentin kokonaisuuden kausaalisesta vaikutuksesta ”alaspäin” sen osien ominaisuuksiin. Siten emergenssin ja kausaalisen voiman käsitteet kytkeytyvät kriittisessä realismissa kiinteästi toisiinsa ja nämä käsitteet usein sulautetaan toisiinsa puhumalla emergenteistä voimista. Joskus emergenttien ominaisuuksien katsotaan myös pakenevan tieteellistä selittämistä, minkä vuoksi tällä käsitteellä on jonkin verran huono maine tieteellisesti orientoituneiden tutkijoiden piirissä.

Kolmannessa artikkelissa esitän Bhaskarin ja muiden kriittisten realistien käyttämän kausaalisen voiman ja siihen kytkeytyvän luonnonvälttämättömyyden käsitteen perustuvan pitkälti Bhaskarin tieteenfilosofian opintojen ohjaajana toimineen Rom Harrén ajatteluun. Osoitan kuitenkin, että Harrén (yhteistyössä Edward H. Maddenin ja Peter F. Secordin kanssa) 1970-luvun alkupuolella muotoilema kausaalisten voimien käsitteistön ja Bhaskarin kehittäämä kausaalisen voiman käsite eroavat toisistaan ainakin kahdessa tärkeässä suh-

teessa. Ensiksikin Harré ei (Bhaskarista poiketen) käytä emergenssin käsitettä kausaalisen voiman käsitteen muotoilussa ja, toiseksi, hän ei (Bhaskarista poiketen) sijoita kaikkia kausaalisia voimia todellisuuden transsendentaaliseen kerrokseen, joka on periaatteellisista syistä havaintojen tavoittamattomissa. Molemmat heistä kuitenkin lataavat melko vahvoja essentialistisia oletuksia kausaalisen voiman ja siihen liittyvään luonnollisen lajin (*natural kind*) käsitteeseen, joiden osoitan johtavan ongelmiin biologisten ja sosiaalisten entiteettien käsitteellistämässä. Lisäksi kyseenalaistan Bhaskarin kausaalisen voiman käsitteen transsendentaalisen tulkinnan tuomalla esiin sen ongelmallisia metodologisia seuraamuksia, jotka liittyvät muun muassa mahdottomuuteen arvioida empiirisesti havaitsemattomien sosiaalisten rakenteiden kausaalisia voimia koskevia teorioita. Tarkastelen kriittisesti myös kausaalisen voiman käsitteen erilaisia käyttötapoja kriittisen realismin sosiaaliantologiassa. Esitän muun muassa, että Bhaskarin mentaalisten voimien (esim. kyky käyttää kieltä ja kyky tarkkailla omaa ajattelua ja toimintaa) tulkinta näyttää johtavan sellaiseen ontologiseen dualismiin, jossa mentaaliset voimat erotetaan ontologisesti ruumiin ominaisuuksista, vaikka hän pyrkiikin emergenttien voimien materialismillaan erottautumaan kartesiolaisesta substanssidualismista. Bhaskarin näkemyksen tilalle ehdotan, että mentaaliset voimat tulkittaisiin biologisten organismien neurofyysiologysten järjestelmien emergenteiksi ominaisuuksiksi. Lisäksi argumentoin maltillisen anti-essentialismin puolesta kausaalisen voiman käsitteen tulkinnassa ja kyseenalaistan mahdollisuuden esittää tyhjentävä ontologinen määritelmä kausaliteetin käsitteelle.

Neljännessä artikkelissa osoitan Bhaskarin synkronisen emergenssin käsitteen kytkeytyvän erottamattomasti hänen kausaalisen voiman (*causal power*) käsitteeseensä ja argumentoin hänen emergenssin käsitteensä olevan ongelmallisella tavalla monimerkityksinen. Esitän Bhaskarin käyttävän synkronisen emergenssin käsitettä ainakin kolmessa eri merkityksessä, jotka nimeän kompositionaaliseksi, syvä-relationaaliseksi ja globaaleja todellisuuden tasoja kuvaavaksi emergenssin käsitteeksi. Kompositionaalinen emergenssin käsite liittyy Bhaskarilla luonnontieteiden tutkimien olioiden (esim. molekyylit ja biologiset organismit) osien ja kokonaisuuden ominaisuuksien välisiin suhteisiin. Kompositionaalinen emergenssin käsite viittaa siis sellaisiin tietyn yksilöolion kokonaisuuden ominaisuuksiin, jotka (i) puuttuvat sen osilta, (ii) eivät ole osien ominaisuuksien resultantteja tai aggregaatteja ja (iii) kykenevät vaikuttamaan kausaalisesti "alaspäin" osien ominaisuuksiin. Esitän että tämä synkronisen emergenssin käsitteen versio on oikeansuuntainen sillä varauksella, että sen kuvaamia emergenttejä voimia ei sijoiteta tuonpuoleiseen transsendentaalisen olemisen piiriin ja että luovutaan synkronisista tavoista tulkita "alaspäin suuntautuvan" kausaation (*downward causation*) käsite. Ottamalla nämä varaukset huomioon voidaan kompositionaalisesti emergenttien ominaisuuksien myöntää olevan ainakin periaatteessa yhteensopivia niiden tieteellisen selittämisen kanssa. Syvä-relationaalinen emergenssin käsite puolestaan kytkeytyy Bhaskarin sosiaaliantologiaan, jossa hän tulkintani mukaan argumentoi abstraktien sosiaalisten asemien sisäisistä suhteista (*internal relations*) koostuvien sosiaalisten

rakenteiden (esim. kapitalistiset tuotantosuhteet) olevan yksilöiden ominaisuuksista ja heidän vuorovaikutussuhteistaan ontologisesti erillisiä – joskin yksilöiden toiminnasta riippuvaisia. Osoitan syvä-relationaalisen emergenssin käsitteen olevan ongelmallinen muun muassa siitä syystä, että sosiaaliset rakenteet Bhaskarin esittämässä mielessä eivät ole sellaisia konkreettisia yksilöolioita, jotka ylipäätään voisivat omata kausaalisia voimia. Lisäksi syvä-relationaalisten sosiaalisten rakenteiden emergenttien voimien emergenssiperusta jää Bhaskarin ajattelussa epäselväksi, mistä puolestaan seuraa se, että syvä-relationaaliset emergentit voimat uhkaavat jäädä periaatteellisista syistä tieteellisesti selittämättömiksi. Esitän myös globaaleihin todellisuuden tasoihin (esim. kemialliseen, biologiseen, psykologiseen ja sosiaaliseen) liittyvään emergenssin käsitteeseen sisältyvän ongelmia muun muassa siksi, että tieteen tutkimana todellisuus ei nykytutkimuksen mukaan muodosta mitään siistiä tasohierarkiaa.

Bhaskarin emergenssin käsitteen kritiikin ohella pyrin muotoilemaan kausaalisen voiman ja emergenssin käsitteen konkreettisempia tulkintoja, joiden kehittämisessä tukeudun Mario Bungen systeemiontologiaan, siihen liittyvään emergenssin käsitteeseen sekä William Wimsattin asteittaiseen emergenssin käsitteeseen. Tästä näkökulmasta luonnostelen sosiaaliontologiaa, jonka mukaa sosiaalinen todellisuus koostuu paitsi erilaisia (ainakin osittain muutoksenalaisia) kausaalisia kykyjä ja taipumuksia omaavista ihmisistä myös useiden ihmisten ja heidän käyttämiensä artefaktien (esim. tekstit, tietokoneet, rakennukset ja kulkuvälineet) muodostamista sosiaalisista järjestelmistä, joilla on emergenttejä ominaisuuksia suhteessa niiden osina toimivien yksilöiden ominaisuuksiin. Bungea seuraten en kuitenkaan kiellä mahdollisuutta esittää erilaisia tieteellisiä selityksiä sosiaalisten järjestelmien emergenteille ominaisuuksille. Pyrin niin ikään osoittamaan, että emergenttejä ominaisuuksia omaavia sosiaalisia järjestelmiä, kuten sosiaalisia ryhmiä ja organisaatioita, voidaan tietyillä ehdoilla pitää (kollektiivisina) kausaalisina toimijoina. Yhteiskuntaluokat eivät kuitenkaan näkemykseni mukaan yleensä muodosta konkreettisia sosiaalisia järjestelmiä, koska niihin kuuluvat ihmiset eivät välttämättä ole missään tekemisissä keskenään. Tästä huolimatta esitän Bungea seuraten, että yhteiskuntaluokkakäsitteiden voidaan katsoa viittaavan joko yhteiskunnan muodostavien ihmisten tai heidän sosiaalisten suhteidensa objektiivisiin ominaisuuksiin, minkä vuoksi niitä ei pidä tulkita pelkästään yksilötoimijoiden diskursiivisiksi kategorioiksi. Argumentoin edelleen että konkreettisilla sosiaalisille järjestelmille ei voi olla sellaisia kausaalisia voimia omaavia sosiaalisia rakenteita, jotka olisivat ontologisesti erillisiä järjestelmän muodostavien ihmisten toiminnasta ja vuorovaikutuksesta. Pyrin myös soveltamaan William Wimsattin ajatusta emergentin ominaisuuden käsitteen asteittaisuudesta ja hänen muotoilemiaan aggregatiivisuuden ehtoja sosiaalisiin järjestelmiin ja tätä kautta kehittämään metodologisia välineitä, joita käyttämällä erilaisten emergenttien sosiaalisten ominaisuuksien luonnetta voisi täsmentää ja sosiaalisen emergenssin mekanismeja tutkia.

Viimeisessä artikkelissa analysoin ja kritisoin Bhaskarin sosiaalisen rakenteen käsitettä sekä Margaret Archerin siihen esittämiä parannusehdotuksia. Edellä mainitsemani tulkinnan mukaan ymmärrän Bhaskarin käyttämän sosiaa-

lisen rakenteen käsitteen viittaavan abstraktien sosiaalisten asemien (esim. kapitalistin ja palkkatyöläisen sosiaalinen asema) sisäisiin suhteisiin, joilla on näissä asemissa toimivien yksilöiden ominaisuuksiin ja heidän sosiaaliseen vuorovaikutukseensa palautumattomia kausaalisia voimia. Esitän kuitenkin monien aiempien kommentaattoreiden tavalla, että Bhaskar sen enempiä kuin Archerkaan eivät ole täysin johdonmukaisia sosiaalisen rakenteen käsitteen käytössään. Pysin myös osoittamaan, että Bhaskarin sosiaalisten rakenteiden käsitteellistämistapaan sisältyy ainakin kaksi pulmaa. Ensiksikin sosiaaliset rakenteet erotetaan siinä ongelmallisella tavalla konkreettisesta sosiaalisesta todellisuudesta ja, toiseksi, siinä sitoudutaan empiirisen tutkimuksen kannalta ongelmalliseen essentialismiin. Lisäksi argumentoin, että kriittiset realistit eivät ole onnistuneet kehittämään uskottavia menetelmiä, joilla abstrakteista sosiaalisista rakenteista pystyisi muodostamaan empiirisesti perusteltua tietoa. Havainnollistan näitä ongelmia Karl Marxin kapitalismiteorialla, jota Bhaskar ja eräät muut kriittiset realistit (esim. Andrew Collier ja Andrew Sayer) käyttävät esimerkkinään kriittisen realismin metodologian ja ontologian kanssa yhteensopivasta yhteiskuntatieteellisestä tutkimuksesta. Hahmottelen artikkelissa myös Bungen systeemiontologiaan perustuvaa vaihtoehtoista tapaa tulkita sosiaalisen rakenteen käsite, jossa tämä käsite viittaa konkreettisen sosiaalisen järjestelmän muodostavien yksilötoimijoiden suhteisiin ja vuorovaikutuksiin. Argumentoin tämän käsitteen soveltuvan Bhaskarin sosiaalisen rakenteen käsitettä paremmin empiiriseen yhteiskuntatieteelliseen tutkimukseen.

Tutkimuksen pääasiallisena tarkoituksena on kehittää kriittisen realismin oppijärjestelmää konstruktivisen kritiikin kautta entistä realistisempaan ja empiirisen yhteiskuntatieteellisen tutkimuksen kannalta hedelmällisempään suuntaan. Tämän kritiikin esittämisessä tukeudun paitsi kriittisen realismin piirissä esitettyihin näkemyksiin myös tämän suuntauksen ulkopuolisiin tieteenfilosofiisiin ja metodologiisiin keskusteluihin. Pysin tutkimuksessa kitkemään joitain empiirisen tutkimuksen kannalta haitallisia ajattelutapoja sosiaaliontologiasta, yhteiskuntateoriasta ja yhteiskuntatieteiden metodologiasta, joiden levinneisyys ei rajoitu pelkästään kriittisen realismin perinteeseen. Lisäksi luonnostelen tutkimuksessa naturalistista argumentaatiomenetelmää, jota voi soveltaa paitsi luonnontieteiden ja yhteiskuntatieteiden tutkimuksen todellisuuden ”globaalin” ontologian myös erilaisten ”lokaalimpien” ontologioiden tutkimisessa. Tässä mielessä tutkimus liittyy keskusteluun ontologian metodologiasta, jolla on puolestaan relevanssia sekä yhteiskuntateoreettisen keskustelun että yhteiskuntatieteellisten tutkimusteorioiden muotoilemisen kannalta. Kehittelen edelleen Bungen ja Wimsattin ajatusten pohjalta joitain uusia käsitteellisiä ja metodologisia välineitä sosiaalisen emergenssin ilmiöiden tutkimiseen, jotka toivoakseni edistävät näiden ilmiöiden yhteiskuntatieteellistä jatkotutkimusta. Monet tutkimuksessa käsittelemistäni kysymyksistä kytkeytyvät myös yhteiskuntatieteiden ja luonnontieteiden suhdetta koskevaan keskusteluun, jota pidän hyvin tärkeänä ja ajankohtaisena. Välillisesti tutkimuksen tulokset voivat myös edistää sosiaalista todellisuutta koskevaa empiiristä tutkimusta yhteiskuntatieteissä.

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