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ANALYTICAL MARXISM

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Abstract. This paper provides a comprehensive survey of the literature on Analytical Marxism (AM) and analyses its relevance for social theory. AM is precisely defined and distinguished from Rational Choice Marxism (RCM). The different substantive implications of the two approaches are discussed: according to RCM, the role of Marxism in the social sciences is exhausted, whereas AM has reconstructed a set of propositions that aim to provide the foundations of a distinctive approach in social theory. The methodological debate around and within AM is analysed and the shortcomings of methodological individualism and rational choice theory are stressed, raising doubts on the claim that RCM is the only scientific approach to Marx's theory. Yet, wholesale rejections on *a priori* methodological or exegetical grounds are questioned. A focused, immanent critique of RCM is developed, which emphasizes the lack of an adequate analysis of structural constraints and endogenous preferences in RCM models. It is argued that the analysis of endogenous preferences and structural constraints is consistent with an anti-reductionist AM approach and it may provide the outline of a fertile, distinctive research programme in explanatory social theory that builds on the core of Marxism identified by AM.

Keywords. Analytical Marxism; Rational Choice Marxism

1. Introduction

In 1978, in the midst of the decline of structuralist Marxism and the renaissance of liberal egalitarianism, *Karl Marx's Theory of History: A Defence* appears, in which G.A. Cohen reconstructs historical materialism (hereafter, HM) guided only by 'two constraints: on the one hand, what Marx wrote, and, on the other, those standards of clarity and rigour which distinguish twentieth-century analytical philosophy' (Cohen, 1978, p. ix). The book marks the birth of Analytical Marxism (hereafter, AM): 'Cohen's book did something that had not been done before: it defined the theory of [HM] as a set of claimed theorems following from a set of postulates, and it subjected the validity of the postulates and the inferences drawn from them to the scrutiny which has come to be the hallmark of analytical philosophy' (Roemer, 1994a, p. ix).

In the following three decades, AM has provided some of the most influential Marxist analyses, and many significant insights on core methodological and substantive issues in social theory, of interest to Marxists and non-Marxists alike.

AM has provided some classic analyses in economic theory (Roemer, 1981, 1982a, 1986a); political philosophy (Elster, 1985; Cohen, 1988, 1995, 2000a; Roemer, 1988; van Parijs, 1993); history (Aston and Philpin, 1985; Brenner, 1986); class theory (Wright, 1985, 1997) and political science (Przeworski, 1985a; Przeworski and Sprague, 1986).[1] The relevance of AM is readily measured by its impact in philosophy and the social sciences, and by the vast literature it has generated, and it continues to generate.

The overall contribution of AM to critical social theory is controversial, though. The core tenet of AM is the denial of a specific Marxist methodology and by adopting the tools of mainstream social science and analytical philosophy, it has indeed translated some Marxist ideas 'into terms that bear scrutiny according to the most demanding disciplinary standards in [mainstream] philosophy or in appropriate social science' (Levine, 2003, p. 132). AM has provided important insights on crucial topics in social theory, such as the theory of history, the class structure of advanced capitalist economies and exploitation theory. AM analyses, however, have led to the rejection, or the radical revision, of a number of concepts and propositions, such that the viability of a distinctively Marxist, or indeed analytical Marxist, perspective in social theory is put into question. As eloquently put by Levine, if the aim of AM was to discover the rational kernel of Marxist theory, and then reconstruct Marxism on that basis, it is tempting to conclude that 'the operation succeeded (more or less), but the patient died'(Levine, 2003, p. 132).

This paper provides an extensive review of the literature in order to evaluate the contribution of AM to social theory. In particular, AM is analysed in terms of its ability to provide an innovative, distinctive and fertile research programme in critical social theory. On the one hand, as a new 'school' in Marxist theory, this has been the primary and most ambitious aim of AM, and it is the issue around which most of the debates have revolved. On the other hand, this is the central question to be addressed, in order to understand the potential of AM to promote further research in explanatory social science.

First of all, in Section 2 later, a common misconception is refuted and AM is distinguished from the narrower approach also known as Rational Choice Marxism (hereafter, RCM). They have different implications: RCM contributions to Marxist social theory are mainly negative and do suggest that the role of Marxism in the social sciences is exhausted. Instead, according to scholars adopting a broader AM approach, AM has reconstructed a set of core propositions that can provide the foundations of a fertile, distinctive Marxist research programme in explanatory social science. The two approaches have also had different trajectories: whereas RCM has been abandoned by all of its most prominent practitioners, several important contributions in the AM tradition have continued to appear (Brenner, 2002, 2006; Levine, 2003, 2009; Nielsen, 2003; Wright, 2005, 2006, 2009).[2] Critics often illegitimately proceed from the critique of RCM to the rejection of AM.

The main distinction between AM and RCM is methodological: although the methodological tenets of AM are not uncontroversial, they are weaker than those of RCM. AM is consistent with an anti-reductionist perspective that emphasises the importance of social structures and the role of culture, social norms, endogenous

preferences and non-instrumental rationality. RCM can be seen as a sub-school of AM and the methodological tenets of RCM – in particular, methodological individualism (hereafter, MI) and rational choice theory – are shared only by a subset of analytical Marxists.

The main methodological issues raised by AM and RCM are analysed in Section 3. In fact, methodological concerns lie at the core of the definition of AM and RCM as distinctive approaches in critical social theory. The focus of the paper is not exegetical, though, and the primary question addressed is not whether the methods advocated were actually Marx's. After all, many interesting developments in Marxism have derived from the encounter with different traditions. The question is instead whether the methods advocated are appropriate to analyse central questions of social theory, or indeed if, as RCM claims, they represent the only scientific approach to Marxist theory.

An exhaustive analysis of some of the most debated issues in the philosophy of science goes beyond the boundaries of this paper. Yet the comprehensive survey of the methodological debate around, and *within*, AM and RCM presented in this paper helps to clarify both the distinction between the two approaches, and the actual differences with alternative approaches in critical social theory. Further, it raises some doubts on RCM methodological tenets – in particular, MI and rational choice theory – and on the claim that RCM is the only scientific approach to Marxist theory. It also suggests that the methodology advocated by RCM represents merely one – and not necessarily the most appropriate – of a number of potential analytical routes to AM.

The analysis of the methodological debate also provides the foundations for a robust – indeed, immanent – critique of RCM developed in Section 4. According to *all* analytical Marxists, including RCM, the analysis of structural constraints on individual behaviour and the emphasis on the social formation of agents are central in social theory and they are core, distinctive features of Marxism, and of AM. Yet, it is well known – and explicitly acknowledged by RCM – that the endogeneity of preferences and the analysis of structural constraints pose some serious challenges to the methodological approach advocated by RCM. This methodological tension may explain a key contradiction of RCM: despite all the emphasis on endogenous preferences and structural constraints, they play hardly any role in RCM models. But if preferences can be taken as exogenously given, and structural constraints can be abstracted away (or, in any case, left unexplained) in most cases, it is quite unclear in what sense these issues are deemed core features of social theory. Conversely, if they are central to Marxist theory, then it is odd to draw general conclusions on Marx's propositions based on models in which they play hardly any role.

The relevance of the previous issue goes beyond abstract methodological discussions. In Section 4, the AM and RCM literature in three core areas of social theory – namely, HM, exploitation theory and the theory of class struggle – is examined and the relevance of endogenous preferences and structural constraints is shown. To assume them away, or to leave them unexplained, significantly reduces both the explanatory power of RCM models and the robustness of RCM

negative conclusions on Marxist propositions. Instead, AM contributions show that the analysis of endogenous preferences and structural constraints leads to a critical revision of several RCM results and may provide the outline of a fertile, distinctive research programme in explanatory social theory that builds on, and is complementary to, the core of Marxism identified by AM. Methodologically, an approach that emphasises individual choices, but takes into account structural constraints and endogenous preferences departs from existing RCM models, but is consistent with a more general anti-reductionist AM approach.

Two final remarks are worth making at this point. First, this paper provides a comprehensive survey of the literature, and all of the main AM findings are reviewed (especially in Sections 2 and 4). Yet given its theoretical focus, the paper devotes special attention to AM writings in economics and in the social sciences, to the methodological debate, and to recent developments within AM. A more detailed exposition of some classic contributions can be found in Buchanan (1987), Mayer (1994) and Roberts (1997), although these surveys do not spell out the definition of AM, and the distinction with RCM, with the necessary clarity.

Second, given its analytical, rather than historical focus, this paper does not provide a thorough analysis of AM from the viewpoint of the history of thought. A detailed account of the birth and development of AM and of the so-called 'September group', which started to meet in London in 1979, can be found in Carling (1986), Wright (1989, 2001) and Levine (2003).[3] This paper does suggest, however, an original interpretation of the different trajectories of AM and RCM from the viewpoint of the history of thought that focuses on the narrower methodological commitments of RCM and on the limits of its analytical models. A more detailed analysis along these lines is developed in Veneziani (2008a).

2. So Close, So Far Away: Analytical and Rational Choice Marxism

Given the theoretical, methodological and even political heterogeneity of analytical Marxists, it is difficult to define AM, either theoretically or in terms of membership.[4] Attempts to identify a set of substantive propositions shared by all analytical Marxists (e.g. Goldstein, 2006; Tarrit, 2006) are necessarily vague and ultimately unconvincing. To be sure, no analytical Marxist 'accepts the law of the tendency of the rate of profit to fall . . . and . . . only one, Brenner, . . . still holds the labour theory of value expounded in volume I to be true' (Callinicos, 1987, p. 68), but this by no means identifies AM as a distinct approach in Marxist thought.

There are some common traits, however, that define 'a style of theorizing' (Wright *et al*., 1994, p. 56), if not a school. A core tenet of AM, and its main departure from classical Marxism is the denial of a specific Marxist methodology, dialectical or otherwise. Analytical Marxists believe that 'although the word "dialectical" has not always been used without clear meaning, it has never been used with clear meaning to denote a method rival to the analytical one' (Cohen, 2000b, p. xxiii; see also Roemer, 1986b; Levine, 1989; Wright *et al*., 1992).

More precisely, Wright (1989, pp. 38–39) proposes the following definition:

Definition 1. *Analytical Marxism (AM) is defined by an analysis of Marxist concerns that is focused through*

C1. 'A commitment to *conventional scientific norms* in the elaboration of theory and the conduct of research'.

C2. 'An emphasis on the importance of *systematic conceptualisation* [. . .]. This involves careful attention to both definitions of concepts and the logical coherence of interconnected concepts'.

C3. 'A concern with a relatively *fine-grained specification of the steps in the theoretical arguments linking concepts*'.

C4. 'The importance accorded to *the intentional action of individuals*'.

Definition 1 forcefully suggests that the boundaries of AM are wider and fuzzier than is commonly assumed. It encompasses all self-defined analytical Marxists; but it is sufficiently general to allow for a wide range of methodological and substantive positions, such that the school of British Marxist historians,[5] and various analytically oriented Marxist philosophers and social scientists may also be included, even if they do not explicitly associate themselves with AM.[6] Besides, as Wright (1989, p. 39) acknowledges, the methodological commitments expressed in C1–C4 are not the monopoly of AM as a self-conscious school.

C1–C4 are by no means trivial, though, and Definition 1 does exclude a number of approaches, such as critical theory, post-modern and post-structuralist Marxism, the 'capital logic' school, etc. The emphasis on conventional scientific norms and on micro-analysis, and the rejection of a distinctive Marxist method have been questioned on philosophical and methodological grounds. According to critics, AM can provide only limited insights because the analytical method is based on a framework of rigid and exclusive dichotomies, and produces 'not clarity and rigour, but systematic misunderstanding and misinterpretation' (Sayers, 1989, p. 82). Moreover, C1–C4 do not (and cannot) define a distinctive approach in social theory, and AM is just a minor variant of the mainstream. For the analytical method distorts Marxist theory and the negative conclusions reached by AM prove 'the dangers of using philosophical tools especially designed to bury Marxism' (Kennedy, 2005, p. 341). Against AM, many authors defend a specific Marxist methodology, based on dialectics and/or methodological holism (Sayer, 1987; Carchedi, 1989; Mandel, 1989; Sayers, 1989; Bronner, 1990; Moggach, 1991; Hunt, 1992; Varoufakis, 1992; Burkett, 2001; Kennedy, 2005). A thorough analysis of (the many different concepts of) dialectics and methodological holism is beyond the scope of this paper, but some points can be made, which raise doubts on wholesale rejections of AM on *a priori* grounds.

To be sure, some analytical Marxists have interpreted C1 narrowly as a commitment to specific approaches within the analytical tradition. Much of AM is 'grounded philosophically in an empiricist, and more specifically positivist, commitment to an instrumentalist theory of meaning' (Weldes, 1989, p. 360), and its foundations lie on specific, and therefore debatable, positions within analytical

philosophy, in particular Wittgenstein and Davidson (Kirkpatrick, 1994). But this is not implied by C1. Contrary to a common misconception (e.g. Kirkpatrick, 1994; Tarrit, 2006), logical positivism is a defining feature of RCM, but *not* of AM. In AM, the emphasis on positivism is often only a statement 'against post-modernists, conventionalists, relativists, anti-objectivists . . . [and] a claim about the importance of observation in the development of science' (Wright, 2001, p. 16).[7] Marxist philosophers working within the analytical tradition argue that the latter is not defined by a set of common doctrines, but by common standards of successful practice (Ware, 1989; Nielsen, 2003, chapter 3; Wood, 2004), and have proposed interesting post-positivist analytical approaches to Marx where 'the style of analytic philosophy is divorced from positivist substance' (Miller, 1984, p. 4). From this perspective, C1 only requires that Marxist propositions be subjected to rigorous empirical and theoretical scrutiny.

Further, the strength of the appeal to a distinctive dialectical method is unclear, because there is no universally accepted definition of dialectics, and indeed various interesting analytical approaches to dialectics have been proposed (see Arnsperger, 2003; Wood, 2004). Nor is it obvious that 'dialectical logic' would *per se* refute the negative conclusions on Marx's theory reached by AM. The attempts to rescue the standard labour theory of value based on 'dialectics', for instance, seem rather vague and unconvincing (e.g. Moggach, 1991, p. 58).

More importantly, there is no proof that *no* part of Marx's theory can be fruitfully examined using analytical philosophy. Claims that analytical tools are inherently inadequate to capture either the historical (Sayers, 1989) or the critical (Bronner, 1990) nature of Marx's theory have been convincingly refuted by Levine (1982, 2003) and Nielsen (2003, chapter 3). Further, as acknowledged by critics, *Karl Marx's Theory of History* provides a recognisably Marxist, if not orthodox, version of HM, and 'whatever one thinks of the interpretation of [HM] offered there, is one of the classics of twentieth-century Marxist philosophy' (Callinicos, 2001, p. 171).[8]

Actually, AM has reconstructed a set of core propositions that aim to provide the foundations of a distinctive Marxist approach in social theory. According to AM, rather than in its methodology, Marxism remains distinctive 'in organizing its agenda around a set of fundamental questions or problems which other theoretical traditions either ignore or marginalize, and identifying a distinctive set of interconnected causal processes relevant to those questions' (Wright, 2009, p. 102). Thus, Levine (2003, 2009) and Burawoy and Wright (2001) argue that the rational kernel of Marxism reconstructed by AM comprises at least four components.[9] First is the Marxist theory of history, or HM, which aims to provide a theoretical explanation of long-term historical trajectories. Unlike most currents of Western Marxism, AM considers HM as the most important distinctive theoretical component of Marxism. The AM interpretation of HM is articulated into two main theses. The first states that the level of development of productive forces explains the nature of the economic structure (the *Primacy thesis*). The second states that the nature of the economic structure explains legal, political and ideological superstructures. The key contribution of Cohen's (1978) book is the clarification of

the nature of the explanations involved: they are *functional* explanations, according to which the character of the *explanandum* is determined by its beneficial effect on the *explanans*. Moreover, Cohen argues that functional explanations are not teleological, as maintained by critics of HM: they are *causal* explanations, and thus are consistent with modern notions of science.

According to AM, HM detects an endogenous process that supplies history with a determinate trajectory from one mode of production to another (see Cohen, 1978; Wright *et al*., 1992; and the detailed discussion in Section 4 later). In recent contributions, analytical Marxists interpret HM as 'a theory of historical possibilities opened up by the development of "productive forces" (Levine, 2003, p. 164). From this perspective, HM provides an account of socialism as a possible product of the materialist dynamics and contradictions of capitalism, which can 'unify what would otherwise be a motley of well-meaning, but mainly reactive, causes into a movement with a serious prospect of changing life for the better' (Levine, 2003, p. 171). HM is thus the foundational theory of scientific socialism and a fundamental part of Marxist emancipatory social theory.

Second is a Marxist theory of classes, according to which the class structure of a society is central in the explanation of individual economic outcomes and life opportunities, class conflicts and a range of key social phenomena (Wright, 1997; 2005). The main contribution of AM in class theory consists in the development of a rigorous conceptual apparatus for analysing complex class structures in advanced capitalist economies. Distinctive of Marxist class theory is the conception of classes 'as being structured by mechanisms of domination and exploitation, in which economic positions accord some people power over the lives and activities of others' (Wright, 2009, p. 102). The standard Marxist analysis focuses on the exploitation resulting from differential ownership of capital. Whereas this explains the main class cleavage in capitalism, and the core difference with previous social formations, at a lower level of abstraction it is insufficient to analyse the complexities of class structure and class behaviour in advanced capitalism. Building on Roemer's theory of exploitation (see Section 4 later), Wright identifies other types of productive assets – such as skills and organisational assets – that are unequally distributed among agents and give rise to specific relations of domination and exploitation. Then the class structure of an economy is multi-dimensionally defined by the ownership and control of the *three* types of productive assets.

Theoretically, this provides a unified framework to understand complex class structures in which 'middle classes' are not seen as an exception or a transitory phenomenon in increasingly polarised societies. All classes are defined in terms of relations exploitation and domination based on the assets that agents control. Agents in the middle classes – say, highly skilled workers or hired managers – might be interpreted as belonging to 'contradictory class locations', whereby they may be exploited in one dimension (e.g. because they own little or no capital, and are capitalistically exploited), but exploiters in others (e.g. thanks to their ownership of skills or organisational assets). Hence, this framework allows for a sophisticated analysis of class behaviour: for example, it clarifies the (complex) structure of material interests underlying the possibility of class alliances. For the

structure of asset ownership determines the coincidence or conflict of interests among different classes. Empirically, this theory has provided a fruitful framework for the construction of precise maps of class structures in advanced economies based on the ownership and control of productive assets, which can be consistently used to analyse the evolution of classes over time and the differences in class structures and class behaviour across countries (see the classic empirical analyses by Wright, 1985, 1997).

Third is a Marxist theory of the state, which views states as expressing the rule of the economically dominant class: to each economic structure, there corresponds a different form of state. According to AM, the proletarian state is the only state whose historical aim is to eliminate the need for states, and socialists should aim to establish institutions that are progressively self-effacing, a view that is incompatible with the exclusive emphasis on the state common to all strains of modern political philosophy (see Levine, 2008, 2009).

Fourth is a set of socialist – albeit not specifically Marxist – normative commitments. The systematic discussion, and defence, of the normative dimension of Marxism is one of the most relevant – and highly controversial (see Geras, 1985) – contributions of AM. For 'All classical Marxists believed in some kind of equality, even if many would have refused to acknowledge that they believed in it and none, perhaps, could have stated precisely what principle of equality he believed in' (Cohen, 1995, p. 5). According to AM, Marx was 'a steadfast opponent of applications of *moral* theory in class-divided societies' (Levine, 2003, p. 137), but he did not oppose moral theory as such and was not shy 'in condemning economic, social and political arrangements in normative and even moralistic terms' (Levine, 2003, p. 139). According to AM, Marx's normative commitments include self-realisation, community, autonomy and equality in a classless society (see Lukes, 1985; Buchanan, 1987; Cohen, 1995).

The rigorous reconstruction of these propositions is arguably a significant, positive contribution of AM, which may play an important role for a revival of socialist theory. It is not clear, however, as various analytical Marxists claim, that these propositions provide the core of a fertile research programme in explanatory social theory and that AM, 'more than their traditional or contemporaneous rivals, "discovered" . . . what remains vital in the Marxist tradition' (Levine, 2003, p. x).

Somewhat paradoxically, AM's own contributions do not unambiguously support a positive answer. On the one hand, some AM analyses directly call into question the validity of the above propositions. On the other hand, much of the AM work in the social sciences suggests that Marxism has exhausted its role in explanatory social theory, thus implying that in any case the above reconstruction would be at best a brilliant but sterile logical exercise.

In order to disentangle this issue, a crucial distinction must be made. Definition 1 cannot explain the apparent contradiction, nor can it really explain the vast controversy around AM. For in order to identify the minimum common denominator of AM, it does not include the most contentious axioms, which are endorsed only by some analytical Marxists – in particular Jon Elster, Adam Przeworski and John

Roemer – and which define RCM as a sub-school of AM.

Definition 2. *Rational Choice Marxism (RCM) is defined by an analysis of Marxist concerns that is focused through C2, C3 and*

C1': The use of 'state of the arts methods of analytical philosophy and "positivist" social science' (Roemer, 1986c, pp. 3–4);

C4'(i): MI, 'the doctrine that all social phenomena – their structure and their change – are in principle explicable in ways that only involve individuals – their properties, their goals, their beliefs and their actions' (Elster, 1985, p. 5);

C4'(ii): Rational choice explanations. This 'involves showing that the action was rational and that it was performed because it was rational. That the action was rational means that given the beliefs of the agent, the action was the best way for him to realize his plans or desires. Hence, rationality goes along with some form of maximizing behaviour' (Elster, 1985, p. 9).

C1' and C4' are much stronger than C1 and C4, and, contrary to a common misconception (Carling, 1986, 1990; Hunt, 1986; Hunt, 1992; Kirkpatrick, 1994; Philp and Young, 2002; Tarrit, 2006), Definition 2 incorporates a strongly reductionist stance that is not shared by all analytical Marxists.[10] For example, Cohen's (1978) interpretation of HM relies on functional explanations; Van Parijs (1982; 1993, chapter 4) supports the search for micro-foundations but does not subscribe to C4'; Wright *et al*. (1992) argue that AM supports an anti-reductionist view of explanation that emphasises the importance of agents' intentional actions, but allows for supra-individual postulates.

Definition 2 has more stringent methodological and substantive implications than Definition 1. Its main *methodological* corollary is that MI is the only legitimate foundation for the social sciences, and the only parts of Marx's theory which 'make sense' are those that can be analysed consistently with MI or, more narrowly, with standard 'rational choice models: general equilibrium theory, game theory and the arsenal of modelling techniques developed by neoclassical economics' (Roemer, 1986b, p. 192). Elster (1985, p. 7) argues that Marx was 'committed to [MI], at least intermittently', but, largely due to the influence of Hegelian philosophy, he was inconsistent. Elster reads various passages (especially in the *Grundrisse*, on the movement of capital and the subordinate explanatory role of competition) as an explicit denial of MI, and concludes that Marx was methodologically incoherent, if not intellectually weak (Elster, 1985, p. 508).[11]

RCM typically reaches two kinds of *substantive* conclusions on Marxian propositions and concepts (including some of the core propositions identified by AM): some are considered either wrong or impossible to conceptualise consistently with C4', and thus are discarded. RCM disposes of much of standard Marxian economics along Sraffian and neoclassical lines. According to Roemer (1986a, p. 3) 'the labour theory of value . . . [is] false; the transformation problem is an irrelevancy'. For he shows that outside of Leontief economies, in order to preserve the key Marxian insight concerning the correspondence between class and exploitation status, a definition of labour values must be adopted 'in which

embodied labor time *depends upon equilibrium prices*' (Roemer, 1986a, p. 57), so that values cannot explain prices. Roemer (1981, chapters 4 and 5) also rejects the theory of the falling rate of profit. He proves several extensions of the so-called 'Okishio Theorem', according to which the equilibrium rate of profit will always rise after the introduction of cost reducing technical change. (See also Elster, 1985, chapter 3.2 and chapter 3.4.2). Elster summarily dismisses Marx's theories of capitalist crisis as 'trivial, or rambling and repetitive, or obscure' (Elster, 1985, p. 161). Indeed, after a long journey through Marx's writings, Elster concludes that 'Today Marxian economics is, with a few exceptions, intellectually dead' (Elster, 1986a, p. 60),[12] alongside scientific socialism, dialectical materialism and the theory of productive forces and relations of production (Elster, 1985, pp. 186–200).

RCM also rejects the Marxist theory of class struggle and revolution. According to Przeworski (1982, p. 307), 'The relation between social relations and individual behaviour is the Achilles heel of Marxism': often an excessive malleability of agents is postulated by assuming that class positions lead to class behaviour, which does not explain why class struggles and revolutions do not occur as often as predicted. Thus, in his analysis of revolutionary motivation and rationality, Buchanan (1982, chapter 5) assumes self-interested rational agents and argues that a classic free-rider problem arises as abstention from action is a dominant strategy for every worker. Elster (1985) adopts a more nuanced view and notes that agents normally do not choose in isolation from one another, so that there may be externalities in the utility function, due to altruism or a preference for equality. Assuming these effects not to be so strong as to make cooperation a dominant strategy, a set of conditional preferences for collective action 'might transform the Prisoner's Dilemma into an Assurance Game, in which the cooperative behaviour would be the solution outcome' (Elster, 1986b, p. 213). This suggests an interesting view of workers' organisations as the providers of information that may enable coordination in the assurance game. Nevertheless, RCM remains sceptical about the strength of these altruistic motives and, taking into account the likely costs of a transition to socialism, about the possibility that rational workers will engage in class struggle and revolutions.

Other concepts and propositions can be analysed within a rational choice framework, but need a substantial revision, such that it is unclear whether 'the ensuing theory will be in any distinct sense "Marxist"' (Przeworski, 1985b, p. 400). Elster (1985) and Przeworski (1985a) translate some intuitions on the symbiotic interaction between classes in a game-theoretic framework, but at the cost of a significant shift in both meaning and political implications.[13] Roemer (1982a, 1988) provides micro-foundations to exploitation and classes thanks to (possibly at the cost of) a reduction of Marx's theory to an almost exclusive emphasis on asset inequalities. (These contributions are analysed in Section 4.)

The distinction between AM and RCM is therefore important not just for exegetical purposes: they reach different conclusions concerning the future of Marxism and the definition of a distinctive approach in social theory. According to both AM and RCM, a core legacy of Marxism is a set of normative commitments, which are hardly different from liberal egalitarianism, and several contributions

have recently appeared that investigate normative issues. In particular, the growing literature on equality of opportunity (see Roemer, 1998; Cohen, 2000a), and on universal basic income and market socialism as institutional schemes to promote freedom and equality of opportunity (see, respectively, van Parijs, 1995; Ackerman *et al*., 2005; and Roemer, 1994b; Roemer and Wright, 1996) can be seen as an offshoot of AM and RCM.

For RCM, however, this is the *only* legacy of Marxism, which has instead exhausted its role in explanatory social theory: its valuable insights have been incorporated into the mainstream, the rest should be discarded (Roemer, 1986a, p. 88; Elster, 1986a, p. 220).[14] In the light of RCM conclusions, except for a loose, atheoretical affiliation with (analytical) Marxism, it is unclear in what sense 'it is still possible to be a Marxist' (Elster, 1985, p. 531), as declared by Elster in the closing sentence of a book in which most of Marx's claims are deemed 'pointless', 'absurd' and 'wishful thinking' (see, e.g. Elster, 1985, p. 191, 317 and 390).[15]

RCM conclusions call into question the viability of a distinctive Marxist, or indeed *analytical* Marxist approach in social theory, and thus it is not surprising that RCM has generated a vast controversy. The debate has focused mostly on methodology; and critics have often dismissed RCM on *a priori* methodological grounds arguing that the methods advocated are inherently flawed and make RCM models and conclusions irrelevant for social theory. The next section provides a thorough survey of the debate and suggests a more nuanced view.

The aim is not to provide a detailed treatment of some of the most contentious issues in the philosophy of social sciences, but rather to raise some key general questions concerning the adequacy of RCM methodological principles for the analysis of core issues in critical social theory. (A more focused, immanent criticism of RCM is developed in Section 4.) In order to understand whether AM can provide a distinctive, fertile research programme in critical social theory, it is also crucial to determine whether RCM represents the only way of getting the analytical purchase advocated by AM. Hence in what follows, special attention is devoted to the debate *within* AM.

3. Only One (Analytical) Way?

Many critics reject the use of neoclassical models advocated by RCM.[16] A proper analysis of neoclassical theory goes beyond the scope of this paper, but some points should be made that are central in the debate on AM and RCM. As a universal methodological prescription, the adoption of neoclassical models in critical social theory seems problematic. As is well known in the philosophy of science, the process of *inter-theoretic reduction* is extremely difficult and it can lead to 'the complete *replacement* of the secondary theory, including its ontology, with the primary theory due to the transformation of both the meanings and the content of the secondary theory' (Weldes, 1989, p. 365). The relevance of this issue is indirectly confirmed by the mainly negative results reached by RCM. Further, as Roemer (1982b, p. 285) acknowledges, not all questions of interest in Marxism can be attacked with general equilibrium models and game theory. Roemer's (1982a,

1986d) analysis of HM within a static general equilibrium framework, for one, is not particularly persuasive, and various shortcomings of the specific neoclassical models used by RCM are discussed in Section 4 later.

Yet it is unclear that neoclassical models and assumptions necessarily lead to non-Marxian results, as argued by many critics (Anderson and Thompson, 1988; Wood, 1989; de Brunhoff, 1991; Hunt, 1992). First, it is not obvious how '[t]he congeniality between game theory and reformist policies' (Carchedi, 1989, p. 109) could be proved. The simple observation that game theoretic analyses often lead to non-Marxian conclusions is 'insufficient to establish the truth of this hypothesis. What would have to be shown is that simply by using game theory, the critical, emancipatory content of the analysis is subverted' (Wright, 2001, p. 23). Second, this objection can be forcefully raised against specific models, but its generality is less evident as it relies on a narrow, if unrealistic, description of neoclassical economics as 'ill-suited to modelling anything but supply, demand and technical relationships' (Anderson and Thompson, 1988, p. 225).

For example, the Marxian labour/labour-power distinction, whose absence is widely considered one of the main limits of Roemer's theory of exploitation, can be modelled within a broadly defined neoclassical framework, as in Bowles and Gintis (1990). The falling rate of profit can be naturally conceptualised as a Prisoners' Dilemma (Skillman, 1997). In general, the rejection of *any* attempts at cross-fertilisation is unwarranted, especially if neoclassical economics is considered as a large, heterogeneous box of tools, which do not necessarily require individualistic assumptions, a focus on equilibrium, a static approach and so on. Many critics of AM, for example, argue that game theoretical tools can be fruitfully applied to Marxian economics (Lebowitz, 1988, pp. 195–197; Sensat, 1988, p. 215; McCarney, 1989, p. 158; Weldes, 1989, p. 374; Schwartz, 1995, p. 282).[17] Interestingly, Arnsperger (2003, p. 6) suggests that evolutionary game theory may be useful to model even some aspects of dialectics.

In sum, as a universal methodological prescription, the use of neoclassical models may be questionable, but these tools can provide interesting insights on important issues in critical social theory and they are consistent with a broad AM research programme in the social sciences.

C4' is more problematic. For not only can various doubts be raised on C4' as a universal methodological prescription, it can also be argued that the theoretical models based on C4' have some severe limitations in the analysis of core issues in critical social theory and that the adoption of C4' actually leads to some contradictions in the RCM approach. The former issue is analysed in the rest of this section, whereas the latter is addressed in Section 4 later.

To be sure, many RCM criticisms of methodological holism – defined as postulating that 'there are supra-individual entities that are prior to individuals in the explanatory order' (Elster, 1985, p. 6) – and functionalism are compelling. The functionalist tendency to postulate a purpose without a purposive actor and to assume that systemic, or class, needs create their own fulfilment is unsatisfactory, especially if associated with teleological views of history and society, where long-term tendencies are ultimate explanatory forces (Elster, 1982, p. 454ff).

Criticisms of functionalism and methodological holism do not automatically lend support to C4', however. To deny that '[e]xplanation proceeds from the laws either of self-regulation or of development of [supra-individual] entities' (Elster, 1985, p. 6) does not entail endorsing C4'. For methodological holism is the contrary of MI not its contradictory. Conversely, to reject MI only implies the existence of irreducible social structures, so that not all social phenomena and institutions can be explained *only* in terms of individuals.[18] Moreover, as argued later, pace Przeworski (1985b, p. 400) and Buchanan (1987, p. 107), rational-choice theory is not the only reasonable alternative to functional explanations, and many critics reject both functionalism and the reductionist RCM view of agency.

As admitted by Elster (1986b, p. 202), C4' should be evaluated *per se* as the proper explanatory strategy in the social sciences, rather than in opposition to functionalism and holism, which sometimes appear in AM writings just as a rhetorical 'straw man' (Foley, 1993, p. 301). Neither RCM arguments nor the debates in the philosophy of science, however, provide decisive support for C4'.

C4'(i) does not entail an atomistic perspective: it grants that 'Many properties of individuals such as "powerful" are irreducibly relational so that an accurate description of one individual may require reference to other individuals' (Elster, 1982, p. 453). Nor does it imply that everything about the social outcomes of behaviour can be explained only in terms of individual intentions: non-intentional psychological properties that influence behaviour, and the unintended consequences of intentional behaviour may be relevant (Elster, 1985, pp. 18–27). It does require, however, that 'ultimate ontological and explanatory priority is accorded to the individual' (Weldes, 1989, p. 356).

The rationale for C4'(i) – according to RCM – can be summarised as follows. First, 'If the goal of a science is to *explain by means of laws*, there is a need to reduce the time-span between explanans and explanandum – between cause and effect – as much as possible, in order to avoid spurious explanations' (Elster, 1985, p. 5). The specification of a micro-mechanism is necessary for the credibility of a macro law, because it shows how it 'actually works', but it also enhances our understanding of an explanation. This is deemed crucial in the social sciences, owing to the lack of 'the strong types of regularities and laws that would make us confident in the causal connectedness of social phenomena' (Little, 1989, p. 167). Second, actions are the outcome of the decisions of subjects endowed with consciousness, and only individuals possess consciousness. RCM rejects those structuralist and functionalist conceptions, dominant in some strands of Marxism, which reduce agency to structure by viewing agents as mere bearers of social norms, which they first 'internalise' and eventually act out; or by conceiving of individual choice as severely limited, if not entirely determined, by structural constraints on individual feasible sets (Elster, 1979, pp. 113–115, 1982; Przeworski, 1985b, p. 382; Roemer, 1986b).

The latter approaches seem indeed inadequate, but it is unclear that MI provides a satisfactory alternative, because '[t]he tension between individual and structural explanations is . . . resolved (or dissolved), by fiat, by denying ontological and explanatory status to social structures' (Weldes, 1989, p. 356). As forcefully

shown by various authors, this reductionist stance is rather problematic and the dialectic between agency and structure is not easily assumed away in social theory (Callinicos, 1987; Sensat, 1988; Warren, 1988; Udehn, 2002; Hodgson, 2007). Rather than rehearsing the vast debate on this issue, two points raised by critics of RCM (including analytical Marxists who reject C4') should be mentioned here, which are particularly relevant in economics and which raise serious doubts on C4'(i) as a general methodological prescription. Further criticisms are discussed in Section 4 later.

At the ontological level, it is unclear where the process of reduction should end. On the one hand, individuals can be understood as structures liable of further decomposition into more elementary parts (such as 'parts of the brain' – as the recent literature on *neuronomics* suggests – or even cells). On the other hand, even neoclassical economics admits supra-individual units, by only requiring that they be well-defined decision makers (Howard and King, 1992, p. 346). More importantly, 'ontological reducibility (decomposability without remainder) does not *entail* explanatory reducibility' (Levine, 1986, p. 724). On the ontological claim that societies are collections of individuals, holists and individualists need not dispute. To deny the possibility of purposive action to supra-individual entities is a basic requirement of any materialist ontology, but it does not imply MI.[19] For instance, pace Elster (1985, p. 460), 'it is trivially true that language is made up of properties of individuals . . . [but] one cannot form a concept of language that refers only to the empirical existence of individuals . . . [because] language is the kind of thing that emerges from social interaction' (Warren, 1988, p. 455).

In general, macro-level theories may provide a satisfactory answer to some questions and a micro-mechanism need not improve an explanation. 'World War II was . . . just an aggregation of subatomic particles in motion. But knowing all there is to know about these subatomic particles would not help us, in all likelihood, in knowing, say, the causes of World War II' (Levine, 1986, pp. 724–725, fn.12). The appropriate level of explanation depends on the object of analysis: for example, as argued later, a macro approach is appropriate to analyse the class structure of a capitalist economy, as opposed to the reasons why certain agents belong to given classes.[20] Further, Wright *et al*. (1992, pp. 116–120) distinguish between *tokens* and *types*, and argue that token-reductionism – the micro-reduction of specific instances of social types – is desirable and consistent with a materialistic approach. But type-reductionism is actually impossible in the case of *supervenient* properties and relations, that is, when many distributions of properties of individuals can realise the same social type.

C4'(ii) significantly strengthens C4'(i), but they are logically independent, a point often overlooked by critics (e.g. Bronner, 1990; Goldstein, 2006). On the one hand, rational choice theory can be applied to collective actors (such as trade unions or states), and rational choice models are compatible in principle with the existence of social structures, provided the latter are treated as part of the framework of the decision maker's problem. On the other hand, MI is a methodological claim about legitimate explanations and it does not entail a specific conception of human beings as selfish, instrumentally rational agents.[21] In RCM, there is a presumption

in favour of rationality, but it is not grounded in any substantive assumptions about human nature. As clearly stated by Elster, the assumption that agents behave rationally 'is largely a methodological one. One cannot even start to make sense of people unless one assumes that they are *by and large rational*' (Elster, 1986b, p. 210, italics added).

Therefore listing a set of well-known *empirical* violations of the axioms of rational choice theory (including issues of intransitivity, incompleteness, etc.) *per se* is not sufficient to dismiss RCM, let alone AM, pace Philp and Young (2002) and Tarrit (2006). For the criticisms to be convincing, one ought to show how taking account of such violations would improve an explanation, but it is not obvious how, say, intransitivity would be helpful in this sense.

Yet rational choice theory can be criticised on *methodological* grounds and, contrary to what Elster suggests in the passage quoted above, it is certainly not the only way of capturing the assumption that agents are '*by and large rational*'. Many authors have highlighted the limitations of rational choice theory and it is beyond the scope of this paper to survey the vast literature on this topic (see Cook and Levi, 1990). For the purposes of this paper, instead, it is important to note that some major methodological doubts on C4'(ii) and on the underlying notion of instrumental rationality can be found in the RCM literature itself. Roemer (1989, p. 378) notes that 'it is not always possible for a person to be "rational" . . . because a person may have many dimensions to his interests, and there may be no satisfactory way of aggregating the effect of an action over all these'. Przeworski (1985b, p. 381) acknowledges that the limits of the conception of 'undifferentiated, unchanging, and unrelated "individuals"', typical of rational choice theory. Much of Elster's work actually shows the limitations of rational choice theory and the importance of other notions of rationality, culture, norms, etc. (see Elster, 1979, 1989, 2000).

These issues are neglected in RCM models, which are based on a conventional view of individual agency and on the identification of intentionality with standard instrumental rationality. This seems to lead to an inconsistency, because rational choice Marxists 'use models founded on neoclassical principles, and make claims about Marxism on this basis, but they do not believe that these principles are true' (Howard and King, 1992, p. 349). According to Elster (1979, p. 116), this inconsistency is only apparent because despite all problems, 'there is a hard core of important cases where the rational choice model is indispensable'. Yet there are many relevant social phenomena that have proved remarkably difficult to conceptualise in a rational choice framework – for example, voting and collective action. Therefore although there may be no logical inconsistency, the problems forcefully highlighted by rational choice Marxists themselves have two important implications. First, they raise further doubts on the validity of C4' as a *general* methodological prescription and on the related idea that RCM can be deemed superior to other approaches on purely methodological grounds. Second, they suggest that alternative conceptions of individual behaviour – and theoretical frameworks – may provide a better explanation of a range of social phenomena. The latter possibility is explored in the next section.

4. Lost in Translation: Structural Constraints and Endogenous Preferences

The analysis of the methodological debate around, and within, AM raises serious doubts on the methodological tenets of RCM (in particular, on C4') and on the view that it is the only scientific approach to Marxist theory. It also suggests that RCM represents merely one of a number of possible analytical routes to AM. It is therefore apt to examine whether RCM models based on C1'–C4' are actually appropriate to analyse central questions of social theory, or rather a broader AM approach is more productive. In this section, this question is addressed by focusing on two specific issues – structural constraints on individual choice and the social formation of agents – which are of foremost importance in social theory, as repeatedly emphasised by AM and RCM. This focused approach provides a robust, immanent critique of RCM methodological and substantive propositions. It also indicates some promising directions for further research in explanatory social theory within a broader AM perspective, which build on, and are complementary to, the set of AM core propositions outlined above.

Structural constraints can be defined as 'social institutions, class relationships and other objective states of affairs which are imposed by past history as a compulsory framework for the actions of the agents' (van Parijs, 1993, p. 79). Structural constraints are central in critical social theory for two reasons. First, the explanation of the genesis and the dynamics of structural constraints, as well as their influence on individual and collective behaviour is deemed a primary aim of social theory. Second, they play an important role in the theory of social contradictions and social change. Structural constraints may or may not affect individual decisions directly, but in any case they raise the problem of generalising individual-level predicates to group-level predicates: if the individual property is not generalisable, a fallacy of composition may arise. Elster cogently argues that fallacies of composition are central in social theory, as 'economic agents tend to generalize locally valid views into invalid global statements, because of a failure to perceive that causal relations that obtain *ceteris paribus* may not hold unrestrictedly' (Elster, 1985, p. 19), leading to counterfinality and social contradictions. According to Elster, this is one of the defining features and important contributions of Marxist social theory.

In AM, this issue forcefully emerges in Cohen's (1988, chapter 13) analysis of proletarian unfreedom. Cohen argues that proletarians are not forced to remain in their class and are individually free to improve their social condition. To generalise such freedom, however, would involve a fallacy of composition: it is impossible for all proletarians to exit their class within capitalist relations of production, and each proletarian is free only on condition that the others do not exercise their similarly conditional freedom. Individual freedom coexists with collective unfreedom. Thus, the presence of structural constraints raises some important issues for individualistic approaches, even if they do not significantly restrict individuals' feasible sets directly. For it implies that 'the group as a whole faces a constraint that no individual member of the group faces' (Lebowitz, 1994, p. 167), which suggests at least that MI be refined because the analysis of the whole cannot be strictly reduced to the analysis of its parts. In this case, a complete explanation of a social

phenomenon cannot refer only to individuals and *their* constraints. Knowledge of group-level properties and constraints is crucial to understand social phenomena, and social structures have explanatory autonomy, because agents' powers also depend on their position in social relations.

Another key insight of critical social theory is the importance of the social determination of agents. Relations of production shape individual behaviour and characteristics, including attributes of rationality: profit maximising behaviour, for example, pre-supposes capitalist social relations, and the abstract individuals postulated in much of mainstream social science, and in RCM models, are deeply structured (Wood, 1990, p. 121; Roberts, 1997, p. 23). Even *within* given social relations, many individual attributes, preferences and beliefs, are socially determined (Bowles, 1998). Indeed, among the defining features of Marxism is the belief that 'in some way life – the things that human beings in their acting do and accept – conditions consciousness so that "life" does not arise out of "consciousness" but "consciousness" out of life' (Nielsen, 1989, p. 537).

RCM acknowledges the importance of the social formation of the individual. The causal explanation of mental states, such as desires and beliefs, is a central component of Elster's theory of scientific explanation (Elster, 1985, pp. 4–5). According to Roemer, unlike in neoclassical theory, crucial to Marxism, and to RCM, is 'a commitment to the malleability of human preferences, to the social formation of the individual' (Roemer, 1986b, p. 201; see also Roemer, 1988, p. 62, 1989, p. 378). And a similar emphasis on the essential relevance of endogenous preferences can be found in many other RCM writings (Przeworski, 1985b, p. 384; Carling, 1986, p. 55; Mayer, 1989, p. 421ff).

C4' requires an asocial view of agents, though, whereby individuals are logically prior and their attributes and beliefs are determined only by the actions and properties of individuals, or else structural features would play a fundamental explanatory role, via their effect on preferences and beliefs. To acknowledge the relevance of the social formation of agents blurs the very distinction between individual and social predicates, and it implies acknowledging that 'the individual-level predicates relied on by the individualist have built into them salient features of the relevant social context' (Weldes, 1989, p. 361; see also Hodgson, 2007). Further, Roemer (1986b, p. 195) admits that the social formation of ideas challenges the methodological premises of RCM, 'since the rational choice model assumes the maximisation of utility subject to constraint'.

Faced with the challenge posed by endogenous preferences and structural constraints, and despite the emphasis on both issues, rational choice Marxists abstract from them in their models and theories: both issues get lost in the translation of Marxian insights into a rational choice framework. The theories of class proposed by Roemer and Przeworski, for instance, ignore Cohen's insights on collective unfreedom and abstract from structural constraints to endorse an individualistic approach, whereby every agent acquires her class and exploitation status 'by virtue of choosing the best option available subject to the [individual] constraints she faces' (Roemer, 1988, p. 10). Similarly, there is no proper analysis of preference formation in RCM. In RCM models, the formation of preferences is

treated as secondary, at least methodologically: 'once the issue of the formation of preferences has been settled, then the most convincing and fundamental explanation of a social phenomenon is . . . one that explains [it] as the result of individuals pursuing their interests . . . subject to the constraints they face' (Roemer, 1989, p. 378; see also Przeworski, 1985b, p. 385; Elster, 1986b, p. 209; Carling, 1990, p. 98). Elster's analysis of collective action, for example, abstracts from endogenous preferences and the formation of solidarity and class consciousness: 'Game theory takes preferences as given, and has nothing to offer concerning preference formation' (Elster, 1982, p. 480, fn.46).

Methodologically, this is unsatisfactory, because RCM does not address the challenge that the endogeneity of preferences and structural constraints poses to C4'. Moreover, it leads to an inconsistency within RCM: if preferences can be taken as exogenously given, and structural constraints can be abstracted away in most cases, it is quite unclear in what sense these issues are deemed core features of social theory. Conversely, if they are central to Marxist theory, then it is odd to draw general conclusions on Marx's propositions based on models in which they play hardly any role. In the rest of this section, it is shown that this inconsistency is not a mere theoretical curiosum and that structural constraints and endogenous preferences are indeed of essential relevance in the analysis of key questions in social theory. The AM and RCM literature on three core topics is analysed – namely, the theory of class struggle and distribution, exploitation theory and HM.

The reasons for this choice are twofold. Firstly, all three topics are of key theoretical relevance both in social theory in general, and within AM. Together with Elster's theory of collective action (discussed in Section 2 earlier), Przeworski's structural analysis of bourgeois democracy and Roemer's work on exploitation are arguably the main RCM substantive contributions to Marxist social science. Actually, Roemer's theory is the most significant contribution in economic theory, and it has had a significant impact on the formulation of the AM theory of class (see Section 2 earlier). One might even argue that 'The striking mathematical results obtained by Roemer are probably the factor most responsible for making [AM] an intellectual force to be reckoned with' (Mayer, 1989, p. 420). The central relevance of HM for the AM research programme is unanimously acknowledged and it has been emphasised in Section 2 earlier.

Secondly, and perhaps more importantly, a thorough analysis of these topics forcefully supports the main theoretical point of this section, and the key criticism of RCM. For it is shown that to assume structural constraints and endogenous preferences away, or to leave them unexplained, significantly reduces both the explanatory power of RCM models and the robustness of RCM negative conclusions on Marxist propositions. Instead, contributions adopting a broader AM perspective, in which structural constraints and endogenous preferences play a significant role, yield interesting and innovative insights, and they suggest some promising directions for further research in explanatory social science.[22]

First, consider Przeworski's influential critique of the Marxist theory of class struggle and of social democracy (Przeworski, 1985a; Przeworski and Sprague, 1986). The main contention is that, in capitalist democracies, it is impossible in the

long run to promote a significant redistribution of income, let alone any socialist transformation. In the political arena, working-class parties cannot win elections, because manual workers are not, and have never been, the majority of the electorate. Even if socialist parties choose class-collaborationist policies, they face an electoral trade-off: they may attract non-blue collar voters but only at the cost of part of their working-class electorate.

In the economic arena, Przeworski analyses a dynamic two-class model with utility-maximizing workers and capitalists. He argues that in a capitalist system, profits are the source of investment and growth, and this explains the material bases of workers' consent to capitalism, and thus of capitalist hegemony: faced with the likely high costs of the transition to socialism, rational workers support capitalism, and the promise of continued welfare growth. It also explains why the labour movement cannot gain significant economic improvements. Attempts to redistribute income trigger a classical profit-squeeze: low profits cause a reduction in investment, which implies lower employment today, and lower production and wages in the future. This mechanism, argues Przeworski, underlies the *structural dependence* of society on capital (see also Przeworski and Wallerstein, 1988).

To be sure, Przeworski is quite effective in exposing the limits of some naïve Marxist views, such as the idea that socialism would automatically emerge from universal suffrage; or that no class compromise is possible. On the whole, however, his reductionist approach to politics and class struggle is questionable.

Consider the structural dependence thesis.[23] Przeworski convincingly argues that the appropriate view of society 'is neither one of two ready-to-act classes nor of abstract individuals, but of individuals who are embedded in different types of relations with other individuals within a multidimensionally described social structure' (Przeworski, 1985b, p. 393), and repeatedly stresses the role of political and ideological factors in the formation of classes as collective actors. Yet, in his models, the profit-squeeze mechanism derives from the interaction between two 'ready-to-act' classes which are perfect agents of 'abstract individuals' with exogenously given preferences. Besides, the social structure is by no means 'multidimensionally described': Przeworski's economies have a very stylised structure, which only comprises the core institutions of capitalism, namely private property (and private investment decisions) and competitive markets.

The explanatory power of these models is limited. They allow Przeworski to derive a profit-squeeze mechanism whereby 'if profits are not sufficient then eventually wages or employment must fall' (Przeworski, 1985a, p. 43), but the notion of 'sufficient', or equilibrium, profits is left unexplained. Therefore, since Przeworski's analysis is in principle consistent with a very wide range of 'sufficient' profits, its implications for the trade-offs faced by the labour movement are rather unclear.[24]

Recent empirical analyses of income shares and employment rates in the post-war USA and UK economies (Mohun and Veneziani, 2008, 2009) provide evidence of short-run profit squeeze cycles, but they show that the short-run equilibrium values around which income shares and employment fluctuate, vary significantly. *Prima facie*, this suggests that a profit-squeeze mechanism does operate at any given

point in time, but the outcome of bargaining and government policies in terms of income shares and employment is – to a relevant extent – undetermined in the longer run. There is in principle more space for reformist policies, especially in a dynamic perspective, than Przeworski suggests. Actually, these findings imply that the theoretically and empirically interesting issue is *not* the profit-squeeze mechanism, but the analysis of 'sufficient' profits as the product of economic, political and ideological conditions. Lacking an explanation of 'sufficient' profits, and of their dynamics, Przeworski's models cannot properly capture the trade-offs faced by the labour movement, and have a limited relevance for Marxist and social democratic theory and practice.

Within AM, Wright (2000b) provides an alternative framework to explain the existence of multiple configurations of class compromise, which reflect different balances of working-class power and capitalist-class interests, and yield different income distributions. These configurations can be interpreted as short-to-medium-run equilibria around which the economy may fluctuate. In his model, the core institutions of capitalism determine the wider boundaries of feasible income distributions, whereas a finer analysis of economic and institutional features is necessary to determine the narrower 'zone of attainability' *within* capitalist relations of production. This richer framework seems more suitable to analyse structural differences between capitalist economies, but also structural changes within capitalist economies, which emerge as the voluntary or involuntary outcomes of agents' actions over time. From a static viewpoint, the economic and institutional structure is given from the past and it determines the short-run equilibrium and trade-off. But, as Wright forcefully argues, in a dynamic perspective, both classes have an incentive to act on the economic-institutional framework to alter the balance of power. They struggle not only to place the economy on a different point along a given growth/distribution trade-off, but also to alter the trade-off itself and modify the terrain of class compromise.

Wright's analysis is firmly structural, but if, as Przeworski himself argues, political and ideological conditions are part of the social structure constraining actors' choices and 'individual identities and thus preferences are continually molded by society' (Przeworski, 1985b, p. 384) then the 'struggle of ideas' also plays a crucial role in the determination of 'sufficient' profits and of the short-run trade-off. As forcefully suggested by Cohen (1994, p. 10), for example, the extent to which we can attempt to redistribute income 'without defeating our aim . . . varies inversely with the extent to which self-interest has been allowed to triumph in private and public consciousness'. In general, it may be argued that the struggle for hegemony is an integral part of class struggle.

The extremely stylised rational choice models analysed by Przeworski, with exogenous preferences and hardly any structure, cannot fully capture the dilemmas of social democratic parties. Political struggles and class conflict are not just about choosing the optimal position in a given structure of trade-offs, but first and foremost about altering the trade-offs themselves, by creating the conditions for changes in structural constraints and for shifts in hegemony. As acknowledged by Przeworski (1985b, p. 401), 'the central difficulty of individualistic views of

history is to explain how actions of individuals produce new conditions . . . Today, the apparatus of game theory can at best elucidate isolated, singular events that occur under given conditions. It has nothing to say about history'. And, one may add, little to say about the major political processes considered by Przeworski.

Next, consider Roemer's (1982a, 1988) theory of exploitation and class. Roemer defines *Marxian exploitation* as a purely distributive concept measuring an unequal exchange of labour: an agent is exploited (an exploiter) if and only if she works more (less) time than is embodied in her consumption bundle. He analyses various static neoclassical general equilibrium economies with (identical) optimising agents and proves that exploitation and classes emerge in equilibrium if there is differential ownership of productive assets, and asset ownership determines exploitation and class status. These results do not depend on the exchange of living labour: exploitation and classes also emerge in economies where only capital is traded. Therefore, concludes Roemer, competitive markets and asset inequalities are 'the institutional culprits in producing exploitation and class' (Roemer, 1982a, p. 93), whereas coercive relations in the labour market, domination in the workplace, and in general any relations of power, or force, are not essential in exploitation theory.

According to Roemer, though, the concept of Marxian exploitation is problematic: if agents have heterogeneous labour endowments or preferences, 'it is possible for some very wealthy producers to be exploited and for some very poor producers to be exploiters' (Roemer, 1982a, p. 175). Therefore, Marxian exploitation 'in the general case, is misconceived. It does not provide a proper model or account of Marxian moral sentiments' (Roemer, 1994c, p. 85). Roemer proposes a definition of exploitation that focuses on property relations, whereby a coalition of agents is *capitalistically exploited* (exploiting) if it would improve (be worse off) by withdrawing from the economy with its per capita share of productive assets. According to Roemer, the latter definition accurately reflects asset inequalities in general settings and it captures the essential normative content of Marxian exploitation theory, which is interpreted as requiring 'an egalitarian distribution of resources in the external world' (Roemer, 1994c, p. 3). Actually, Roemer contends that a concern for asset inequalities is the *only* sound legacy of exploitation theory, which reduces to a variant of liberal egalitarianism and is 'a domicile that we need no longer maintain: it has provided a home for raising a vigorous family, who now must move on' (Roemer, 1994c, p. 67).[25]

Roemer's theory provides many insights on exploitation and classes, but his reductionist approach is not entirely convincing. First of all, the methodological claim that exploitation and class *should* be analysed with 'standard general equilibrium models' (Roemer, 1986b, p. 193) is objectionable. It is unclear that the Walrasian model best incorporates Marx's attempt to model a capitalist economy unencumbered by 'swindling and cheating': competitive forces do not cease to operate outside the Walrasian environment and the interpretation of Marxian competition in Walrasian terms can be questioned on methodological and substantive grounds (Schwartz, 1995; Desai, 2002). Besides, Roemer's own static economies do not convincingly show that exploitation and classes *can* be analysed within a Walrasian model incorporating only the core institutions of capitalism. For

Roemer's models incorporate major departures from a Walrasian framework, such as the impossibility of savings and the absence of intertemporal credit markets, and it can be proved that if time is introduced, it is sufficient to allow for savings to make exploitation transitory, even if wealth inequalities persist (Veneziani, 2007, 2008c). This suggests that Roemer can adopt an individualistic approach to exploitation and classes only thanks to the introduction of *ad hoc* individual constraints (such as the impossibility of saving) that severely limit agents' choices and guarantee the reproduction of the social structure by fiat. In a sense, structural constraints are implicitly, and somewhat arbitrarily, incorporated into individual ones, rather than being explicitly analysed and modelled.

Second, a purely distributive approach that makes no reference to the *structure* of the interaction between agents seems unable to fully capture the notion of exploitation. As noted earlier, Roemer's proof that the analysis of exploitive relations can be reduced to a focus on asset inequalities between agents interacting in perfectly competitive markets is not robust: if savings are introduced, asset inequalities and competitive markets are necessary to generate exploitation, but they are not sufficient for it to persist. More importantly, although Roemer forcefully argues that coercive relations in the labour market and domination in the workplace are not necessary for exploitation, it is unclear that weaker forms of asymmetric relations between agents should also be ruled out. The view that 'the principal coercion of any mode of production is in maintaining its property rights, [and] our understanding of power, domination and coercion can be reduced to a study of the transformation of property' (Roemer, 1982c, p. 382) is overly reductive and a purely distributive definition of exploitation leads to rather counterintuitive conclusions (Kymlicka, 2002). In general, the informational basis of a purely distributive approach is too impoverished to capture exploitive relations and to distinguish exploitation from other forms of injustice or wrongs (Veneziani, 2008c).

Various analytical approaches have been developed that do not focus on coercion, but on the broader notions of force (Reiman, 1987; Schwartz, 1995), unequal power (Warren, 1997) or vulnerability (Wolff, 1999; Wood, 2004), as essential ingredients of exploitation. These approaches are quite different, but they all suggest that exploitation does not reduce to a kind of resource egalitarianism and emphasise the importance of the *structure* of the interaction between agents in exploitive relations. In particular, it may be argued that exploitation diagnoses the process through which 'certain inequalities in incomes are generated by inequalities in rights and powers over productive resources: the inequalities occur, in part at least, through the ways in which the exploiters, by virtue of their exclusionary rights and powers over resources, are able to appropriate labour effort of the exploited' (Wright, 2000a, p. 1563). Unlike in Roemer's theory, asset inequalities are questionable not only if they arise in morally objectionable ways, and thus yield unjust distributive outcomes, but also because they yield unfair relations of power. From this viewpoint, the socialisation of assets is not only a way to implement an egalitarian allocation, but also a necessary measure to eliminate, or at least reduce, unequal power.

Yoshihara (1998) proposes an interesting model that represents a synthesis of Roemer's approach and the theory of *contested exchange* (Bowles and Gintis, 1990), which incorporates issues of contractual incompleteness and conflicts of interest between the parties to the exchange, and he extends some of Roemer's results on the correlation between asset inequalities and exploitation and class status to this more general context. Yoshihara's analysis is static and does not explicitly focus on issues of dominance, or power. However, his model may provide a useful analytical framework, given that the theory of contested exchange allows one to model relations of power between agents and the Marxian distinction between labour and labour-power. Given their extremely stylised structure, instead, standard general equilibrium models seem unsuitable to analyse the role of asset inequalities in generating the relations of unequal power, or dominance, which characterise exploitive relations.

Finally, consider Cohen's interpretation of HM. Although it is not an example of RCM, the debate on the theory of history provides another forceful illustration of the relevance of structural constraints and endogenous preferences. In Cohen's reconstruction, history is ultimately driven by the development of productive forces. This is thanks to the transhistorical 'rational adaptive practices' of human beings, who face conditions of relative scarcity and 'possess intelligence of a kind and degree which enables them to improve their situations' (Cohen, 1978, p. 152). Scarcity and rationality lead to a tendency for productive forces to develop (the *Development thesis*), but a given level of development of the productive forces is compatible only with a certain type (or certain types) of production relations. Therefore, eventually, development will lead to the transition from one mode of production to the other, as rational agents realise that a change in production relations is necessary to foster the further development of productive forces. Both the technological determinism of Cohen's theory and its abstract, ahistorical notion of rationality have been criticised.[26] In fact, even if agents are rational and aim to improve their condition, this 'does *not* so far provide them with an interest in *improving the forces of production*. Only under *specific structural* conditions is the interest in material advantage tied to an interest in a strategy of productivity-enhancing investment' (Cohen, 1982, p. 268). Brenner (1986) argues that pre-capitalist social formations lacked such conditions and rent extraction was the dominant activity, so that Cohen's approach cannot explain the transition from feudalism to capitalism.

The analysis of the mechanisms at work in historical change is a particularly interesting area of development within AM. The acknowledgment of the importance of structural constraints, and their influence on individual choices, has led analytical Marxists to develop less deterministic versions of HM, even though this has meant deflating the explanatory pretensions of the theory. If 'the content of both rational action and scarcity . . . are not given for all the time, but are instead endogenous to the social system; . . . determined by the relations of production themselves' (Levine and Wright, 1980, p. 62), then a more complex explanation is necessary both for the development of productive forces and, relatedly, for the mechanisms yielding changes in relations of production. The recent literature tends to interpret HM as

a theory of historical *possibilities* opened up by the development of productive forces, rather than as a theory of historical inevitability. Wright *et al*. (1992) propose a *weak* HM that explains the necessary (material) conditions for historical change, the direction of change and the role of class struggle as the means through which change occurs, but does not provide a theory of sufficient conditions for change. Other authors propose various evolutionary mechanisms that select between random variations of relations of production in order to explain the processes that may lead to the transition to a different mode of production (Bertram, 1990; Carling, 1991, 1993; Nolan, 2002, 2006; Farrelly, 2005). The debate on historical development and historical change is not settled, yet, but these approaches seem promising because they do not require Cohen's asocial and rather demanding view of individual rationality, and they analyse the development of social relationships as the outcome of the joint action of human nature with social and other conditions.

5. Conclusion

Whither Analytical Marxism? As for all theoretical enterprises, the answer to this question does not depend exclusively on internal theoretical developments. The emergence of AM was a consequence of the resurgence of the Left in the late 1960s, and of the entry of a young generation of leftist philosophers and social scientists into the Anglo-American academia, in which analytical philosophy was largely dominant. It was also influenced by the perceived disappearance of the working class as a powerful actor of historical change and by the crisis of Marxism in the late 1970s – especially of the official Marxism dominant in the socialist states, which AM viewed as non-scientific and apologetic.

The future of AM is also likely to depend, in part, on the broader social, intellectual and political context, whose evolution is difficult to predict. Yet some tentative conclusions can be drawn from the previous analysis. First, this paper shows that, unlike RCM, scholars adopting a broader AM approach have reconstructed various core Marxist propositions, which may provide the foundations of a distinctive research programme in social theory. Given their pivotal role in AM, and in Marxist theory, one would expect such core areas to be at the centre of further research. Indeed, as shown above, some of the most interesting recent work within AM has focused on historical development and historical change, class structure and class struggles, and further developments may be expected on these topics.

Second, this paper suggests that a key area where significant progress can be (and in part is being) made within a broadly defined AM perspective is the analysis of structural constraints on individual behaviour and of the social formation of individuals. The survey of recent AM contributions shows that the analysis of these central issues in critical social theory raises serious doubts on several RCM propositions, and it indicates some promising lines for further research, which may depart from RCM models, but are consistent with a more general AM approach.[27]

Thus, it may provide the outline of a fertile research agenda in explanatory social theory that builds on, and is complementary to, the core of Marxism identified by AM.

Methodologically, to acknowledge the importance of social structures and of the social formation of individuals supports an anti-reductionist perspective which allows for 'the irreducibility of macro-level accounts to . . . micro-level explanations' (Wright *et al*., 1992, p. 115). Further, it raises doubts on the standard model of agency endorsed by RCM and on the narrow view that 'it is only within the rational-choice context that some of the leading items on the classical agenda of Marxist theory . . . can be fruitfully discussed' (Carling, 1986, p. 55). As shown in this paper, the standard conception of agency is rather *un*suitable to analyse various core issues in Marxist theory.

Yet the emphasis on structural constraints and endogenous preferences does not imply the rejection of formal models, or even neoclassical tools, let alone the denial of the importance of micro-analysis. If human agency is an irreducible aspect of social events, macro-level accounts should be consistent with, if not grounded in, some individual-level analysis and social theory should systematically incorporate a concern with choice. The analysis of structural constraints and endogenous preferences might be the first step towards a more realistic, relational conception of individuals, and thus to a more satisfactory micro-analysis, based on a concept of agency that avoids the dichotomy between abstract free choice and complete social determination of individuals.

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Notes

1. An AM approach has also been recently adopted in anthropology (Donham, 1990), political ecology (Hughes, 2000) and the philosophy of religion (Nielsen, 1999).
2. See also Cohen (2000b), Wood (2004), Levine (2008) and Note 1 above.
3. An interesting issue that has not been thoroughly investigated in the literature concerns the precursors of AM. According to Roemer, the latter include 'the economists N. Bukharin, E. Preobrazhensky, O. Lange and M. Kalecki, and the philosopher G. Plekhanov' (in private correspondence, 13th of May 2010). It is also worth noting that Nowak (1998) identifies a Polish school of analytical Marxism in the 1950s and 1960s.
4. See Ware (1989), Wright (1989), Nielsen (1993). The boundaries of AM do not coincide with the September Group, which has comprised in different phases: Jon

Elster, Adam Przeworski, Gerald A. Cohen, John Roemer, Robert Brenner, Sam Bowles, Joshua Cohen, Robert van der Veen, Pranhab Bardhan, Philippe van Parijs, Hillel Steiner and Erik Olin Wright.

5. For example, C. Hill, G.E.M. de Ste. Croix, E.P. Thompson and E. Hobsbawm. I am grateful to Steven Rigby for this suggestion.
6. This may partly explain the debate in the literature concerning the adherents of AM. See Carling (1986), Ware (1989), Wood (1989), Mayer (1994) and Tarrit (2006).
7. Actually, as noted by an anonymous referee, the difficulties that arise in defining 'positivism' would seem to suggest that the word is best avoided by analytical Marxists.
8. See also Martin (1989, p. 662), Bronner (1990, p. 248) and Kennedy (2005, p. 332).
9. Similar analyses can be found in Wright *et al*. (1992) and Carling (1997, 2006).
10. For a discussion of different varieties of MI, see Wright *et al.* (1992) and Udehn (2002).
11. Many authors have shown that Elster's methodological critique of Marx is based on a piecemeal reading of his texts (Levine, 1986, pp. 725 ff; Sensat, 1988, pp. 206–207; Warren, 1988, pp. 471 ff; Mandel, 1989, pp. 124 ff; Nielsen, 1989, pp. 523 ff; Weldes 1989, pp. 370 ff; Wood, 1989, pp. 56–58, 73–74; Graham, 1998, pp. 302 ff). At most, Elster shows that Marx does not endorse C4', hardly a startling result and arguably not enough to reject Marx's theory.
12. The main exception is the theory of technical change (Elster, 1986a, p. 188).
13. See the debate between Przeworski and Michael Burawoy in the *Socialist Review* (1989), Vol. 2.
14. Cohen (2000a, p. 103), too, has reached a similar conclusion. The evolution of Cohen's thought is reconstructed in Carling (2006) and Callinicos (2001, 2006).
15. For criticisms of Elster, see the special issue of *Inquiry* (1986), Vol. 29, and Wolff (1990).
16. Some authors more generally question the use of *formal* models in critical social theory. For a critical analysis, see Veneziani (2008c, 2009).
17. See, for example, the game-theoretic analysis of class conflict and compromise in the context of incomes policy by Maital and Benjamini (1980) and, more generally, the 'comparative political economy' literature. I am grateful to an anonymous referee for this suggestion.
18. For a particularly clear discussion, see Callinicos (1987, p. 83 ff), Weldes (1989, p. 363 ff), Wright *et al*. (1992, p. 115 ff) and Schwartz (1993, pp.293–294).
19. See Sensat (1988), Warren (1988), Nielsen (1989), Wright *et al*. (1992) and Udehn (2002).
20. For more detailed analyses and further examples, see Sensat (1988, pp. 201–203), Howard and King (1992, pp. 346–347) and Schwartz (1993, pp.294–295).
21. For a detailed discussion, see Elster (1979, 1985, pp. 6 ff), Ripstein (1989, p. 464), Moggach (1991, p. 43 and 59, fn.12) and Schwartz (1993, pp. 298–300).
22. The limits of the RCM analysis of collective action are well known and need not be rehearsed here (for a summary, see Veneziani, 2008b). As admitted by Elster (1986b, p. 18), voting 'provides one of the strongest cases against the omnipotence of rational-choice explanation. Voting does seem to be a case in which the action itself, rather than the outcome it can be expected to produce, is what matters'. Elster (2000) has acknowledged the importance of social norms and endogenous preferences in the analysis of collective action.

23. For a critique of Przeworski's reductionist approach to social-democracy in the *political* arena, see King and Wickham-Jones (1990) and Mohun and Veneziani (2009).
24. Some of these issues have been analysed in the Kaleckian literature on wage-led versus profit-led growth. Yet these contributions play no significant role in Przeworski's analysis.
25. Some Marxists would actually reject Roemer's analysis of exploitation as a *normative* concept. Given the focused critical perspective adopted in this paper, this issue is not central here. For a detailed exposition of Roemer's theory, and the debate around it, see Veneziani (2008c).
26. For a thorough review of the debate on HM, see Rigby (1998). For an analysis of the micro-foundations of Cohen's approach, see Levine and Wright (1980) and Kirkpatrick (1994).
27. For an interesting analysis of recent work on endogenous preferences see Bowles (1998). It is worth noting that Sam Bowles has been a member of the September group (see Note 4), and at least some of his work (including some of his joint work with Herbert Gintis) fits Definition 1.

References

Ackerman, B., Alstott, A. and van Parijs, P. (2005) *Redesigning Distribution*. London: Verso.
Anderson, W.H.L. and Thompson, F.W. (1988) Neoclassical Marxism. *Science and Society* 52: 215–228.
Arnsperger, C. (2003) Cohen, Rawls and the advent of analytical dialectics. Mimeo, Louvain-la-Neuve.
Aston, T.H. and Philpin, C.H.E. (eds) (1985) *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe*. Cambridge: Cambridge University Press.
Bertram, C. (1990) International competition in historical materialism. *New Left Review* 183: 116–128.
Bowles, S. (1998) Endogenous preferences: the cultural consequences of markets and other economic institutions. *Journal of Economic Literature* 36: 75–111.
Bowles, S. and Gintis, H. (1990) Contested exchange: new microfoundations of the political economy of capitalism. *Politics and Society* 18: 165–222.
Brenner, R. (1986) The social basis of economic development. In J.E. Roemer (ed.), *Analytical Marxism*. Cambridge: Cambridge University Press.
Brenner, R. (2002) *The Boom and the Bubble*. London: Verso.
Brenner, R. (2006) *The Economics of Global Turbulence*. London: Verso.
Bronner, S.E. (1990) Politics and judgment: a critique of rational-choice Marxism. *Review of Politics* 52: 242–264.
de Brunhoff, S. (1991) L'individualisme méthodologique: réflexions sur deux écoles de théorie économique. *Economie Appliquée* 44: 33–49.
Buchanan, A.E. (1982) *Marxism and Justice*. Totowa: Rowman and Allanheld.
Buchanan, A.E. (1987) Marx, morality, and history: an assessment of recent analytical work on Marx. *Ethics* 98: 104–136.
Burawoy, M. (1989) Marxism without micro-foundations. *Socialist Review* 19: 53–86.
Burawoy, M. and Wright, E.O. (2001) Sociological Marxism. In J. Turner (ed.), *Handbook of Sociological Theory*. New York: Plenum Publishers.
Burkett, P. (2001) Review of 'Ecology and historical materialism'. *Historical Materialism* 8: 443–459.

Callinicos, A. (1987) *Making History*. London: Polity.
Callinicos, A. (2001) Having your cake and eating it. *Historical Materialism* 9: 169–195.
Callinicos, A. (2006) G.A. Cohen and the critique of political economy. *Science and Society* 70: 252–274.
Carchedi, G. (1989) Classes and class analysis. In E.O. Wright (ed.), *The Debate on Classes*. London: Verso.
Carling, A.H. (1986) Rational choice Marxism. *New Left Review* 160: 24–62.
Carling, A.H. (1990) In defence of rational choice: a reply to Ellen Meiksins wood. *New Left Review* 184: 97–109.
Carling, A.H. (1991) *Social Division*. London: Verso.
Carling, A.H. (1993) Analytical Marxism and historical materialism: the debate on social evolution. *Science and Society* 57: 31–65.
Carling, A.H. (1997) Analytical and essential Marxism. *Political Studies* 45: 768–783.
Carling, A.H. (2006) *Karl Marx's Theory of History* and the recovery of the Marxist Tradition. *Science and Society* 70: 275–297.
Cohen, G.A. (1978) *Karl Marx's Theory of History: A Defence*. Princeton: Princeton University Press.
Cohen, G.A. (1988) *History, Labour and Freedom*. Oxford: Oxford University Press.
Cohen, G.A. (1994) Back to socialist basics. *New Left Review* 207: 3–16.
Cohen, G.A. (1995) *Self-ownership, Freedom and Equality*. Cambridge: Cambridge University Press.
Cohen, G.A. (2000a) *If You're an Egalitarian, How Come You're So Rich?* Cambridge: Harvard University Press.
Cohen, G.A. (2000b) *Karl Marx's Theory of History: A Defence*. Revised edn. Oxford: Oxford University Press.
Cohen, J. (1982) Review of 'Karl Marx's theory of history. *Journal of Philosophy* 79: 253–273.
Cook, K.S. and Levi, M. (eds) (1990) *The Limits of Rationality*. Chicago: University of Chicago Press.
Desai, M. (2002) *Marx's Revenge*. London: Verso.
Donham, D.L. (1990) *History, Power, Ideology: Central Issues in Marxism and Anthropology*. Cambridge: Cambridge University Press.
Elster, J. (1979) *Ulysses and the Sirens*. Cambridge: Cambridge University Press.
Elster, J. (1982) Marxism, functionalism, and game theory. *Theory and Society* 11: 453–482.
Elster, J. (1985) *Making Sense of Marx*. Cambridge: Cambridge University Press.
Elster, J. (1986a) *An Introduction to Karl Marx*. Cambridge: Cambridge University Press.
Elster, J. (1986b) Further thoughts on Marxism, functionalism and game theory. In J.E. Roemer (ed.), *Analytical Marxism*. Cambridge: Cambridge University Press.
Elster, J. (1989) *Solomonic Judgments: Studies in the Limitations of Rationality*. Cambridge: Cambridge University Press.
Elster J. (2000) *Ulysses Unbound*. Cambridge: Cambridge University Press.
Farrelly, C. (2005) Historical materialism and supervenience. *Philosophy of the Social Sciences* 35: 420–446.
Foley, D.K. (1993) 'Reconstructing Marxism' review. *Economics and Philosophy* 9: 297–305.
Geras, N. (1985) The controversy about Marx and justice. *New Left Review* 150: 47–85.
Goldstein, J. (2006) Marxian microfoundations: contribution or detour? *Review of Radical Political Economics* 38: 569–594.
Graham, K. (1998) Collectives, classes and revolutionary potential in Marx. *Poznan Studies in the Philosophy of Sciences and Humanities* 60: 299–314.
Hodgson, G.M. (2007) Meanings of methodological individualism. *Journal of Economic Methodology* 14: 211–226.

Howard, M.C. and King, J.E. (1992) *A History of Marxian Economics: Vol. 2, 1929–1990*. Princeton: Princeton University Press.
Hughes, J. (2000) *Ecology and Historical Materialism*. Cambridge: Cambridge University Press.
Hunt, E.K. (1992) Analytical Marxism. In B. Roberts and S. Feiner (eds), *Radical Economics*. Boston: Kluwer.
Hunt, I. (1986) A critique of Roemer, Hodgson and Cohen on Marxian exploitation. *Social Theory and Practice* 12: 121–171.
Kennedy, S. (2005) G.A. Cohen and the end of traditional historical materialism. *Historical Materialism* 13: 331–344.
King, D. and Wickham-Jones, M. (1990) Social democracy and rational workers. *British Journal of Political Science* 20: 387–413.
Kirkpatrick, G. (1994) Philosophical foundations of analytical Marxism. *Science and Society* 58: 34–52.
Kymlicka, W. (2002) *Contemporary Political Philosophy*. 2nd Expanded edn. Oxford: Oxford University Press.
Lebowitz, M. (1988) Is 'Analytical Marxism' Marxism? *Science and Society* 52: 191–214.
Lebowitz, M. (1994) Analytical Marxism and the Marxian theory of crisis. *Cambridge Journal of Economics* 18: 163–179.
Levine, A. (1982) Toward a Marxian theory of justice. *Politics and Society* 11: 343–362.
Levine, A. (1986) 'Making sense of Marx'. Review. *The Journal of Philosophy* 83: 721–728.
Levine, A. (1989) What is a Marxist today? *Canadian Journal of Philosophy* 15(Suppl.): 29–58.
Levine, A. (2003) *A Future for Marxism?* London: Pluto Press.
Levine, A. (2008) *The General Will: Rousseau, Marx, Communism*, 2nd Edn. Cambridge: Cambridge University Press.
Levine, A. (2009) Marxist approaches. Mimeo, University of Maryland.
Levine, A. and Wright, E.O. (1980) Rationality and class struggle. *New Left Review* 123: 47–68.
Little, D. (1989) Marxism and popular politics: the microfoundations of class conflict. *Canadian Journal of Philosophy* 15(Suppl.): 163–204.
Lukes, S. (1985) *Marxism and Morality*. Oxford: Oxford University Press.
Maital, S. and Benjamini, Y. (1980) Inflation as prisoner's dilemma. *Journal of Post Keynesian Economics* 2: 459–481.
Mandel, E. (1989) How to make no sense of Marx. *Canadian Journal of Philosophy* 15(Suppl.): 105–132.
Martin, B. (1989) How Marxism became analytical. *Journal of Philosophy* 86: 659–666.
Mayer, T.F. (1989) In defense of analytical Marxism, *Science and Society* 53: 416–441.
Mayer, T.F. (1994) *Analytical Marxism*. London: Sage.
McCarney, J. (1989) Elster, Marx and methodology. *Canadian Journal of Philosophy* 15(Suppl.): 135–161.
Miller, R.W. (1984) *Analyzing Marx*. Princeton: Princeton University Press.
Moggach, D. (1991) Monadic Marxism. A critique of Elster's methodological individualism. *Philosophy of the Social Sciences* 21: 38–63.
Mohun, S. and Veneziani, R. (2008) Goodwin cycles and the U.S. economy, 1948–2004. In P. Flaschel and M. Landesmann (eds), *Mathematical Economics and the Dynamics of Capitalism*. London: Routledge.
Mohun, S. and Veneziani, R. (2009) Social democracy and class compromise: evidence from the UK. Mimeo, QMUL.
Nielsen, K. (1989) Afterword: remarks on the roots of progress. *Canadian Journal of Philosophy* 15(Suppl.): 497–539.

Nielsen, K. (1993) Analytical marxism: a form of critical theory. *Erkenntnis* 39: 1–21.
Nielsen, K. (1999) Taking Rorty seriously. *Dialogue* 38: 503–518.
Nielsen, K. (2003) *Globalization and Justice*. Amherst: Humanity Books.
Nolan, P. (2002) A Darwinian historical materialism, In P. Blackledge and G. Kirkpatrick (eds), *Historical Materialism and Social Evolution*. Basingstoke: Palgrave.
Nolan, P. (2006) Why G.A. Cohen can't appeal to Charles Darwin to help him defend Karl Marx (but why others can). *Science and Society* 70: 155–179.
Nowak, L. (1998) The adaptive interpretation of historical materialism: a survey. *Poznan Studies in the Philosophy of the Sciences and the Humanities* 60: 201–236.
van Parijs, P. (1982) Functionalist Marxism rehabilitated: a comment on Elster. *Theory and Society* 11: 497–511.
van Parijs, P. (1993) *Marxism Recycled*. Cambridge: Cambridge University Press.
van Parijs, P. (1995) *Real Freedom for All*. Oxford: Oxford University Press.
Philp B. and Young, D. (2002) Preferences, reductionism and the microfoundations of Analytical Marxism. *Cambridge Journal of Economics* 26: 313–329.
Przeworski, A. (1982) The ethical materialism of John Roemer. *Politics and Society* 11: 289–313.
Przeworski, A. (1985a) *Capitalism and Social Democracy*. Cambridge: Cambridge University Press.
Przeworski, A. (1985b) Marxism and rational choice. *Politics and Society* 14: 379–409.
Przeworski, A. (1989) Class, production and politics: reply to Burawoy. *Socialist Review* 19: 87–111.
Przeworski, A. and Sprague, J. (1986) *Paper Stones: A History of Electoral Socialism*. Chicago: University of Chicago Press.
Przeworski, A. and Wallerstein, M. (1988) Structural dependence of the state on capital. *American Political Science Review* 82: 11–29.
Reiman, J. (1987) Exploitation, force, and the moral assessment of capitalism. *Philosophy and Public Affairs* 16: 3–41.
Rigby, S.H. (1998) *Marxism and History*, 2nd Edn. Manchester: Manchester University Press.
Ripstein, A. (1989) Rationality and alienation. *Canadian Journal of Philosophy* 15(Suppl.): 449–466.
Roberts, M. (1997) *Analytical Marxism: A Critique*. London: Verso.
Roemer, J.E. (1981) *Analytical Foundations of Marxian Economic Theory*. Cambridge: Harvard University Press.
Roemer, J.E. (1982a) *A General Theory of Exploitation and Class*. Cambridge: Harvard University Press.
Roemer, J.E. (1982b) New directions in the Marxian theory of exploitation and classes. *Politics and Society* 11: 253–287.
Roemer, J.E. (1982c) Reply. *Politics and Society* 11: 375–394.
Roemer, J.E. (1986a) *Value, Exploitation, and Class*. New York: Harwood Academic Publishers.
Roemer, J.E. (1986b) 'Rational choice' Marxism: some issues of method and substance. In J.E. Roemer (ed.), *Analytical Marxism*. Cambridge: Cambridge University Press.
Roemer, J.E. (1986c) Introduction. In J.E. Roemer (ed.), *Analytical Marxism*. Cambridge: Cambridge University Press.
Roemer, J.E. (1986d) An historical materialist alternative to welfarism. In J. Elster and A. Hylland (eds), *Foundations of Social Choice Theory*. Cambridge: Cambridge University Press.
Roemer, J.E. (1988) *Free to Lose*. Cambridge: Harvard University Press.
Roemer, J.E. (1989) Marxism and contemporary social science *Review of Social Economy* 47: 377–391.
Roemer, J.E. (ed.) (1994a) *Foundations of Analytical Marxism*. Aldershot: Elgar.

Roemer, J.E. (1994b) *A Future for Socialism*. Cambridge: Harvard University Press.
Roemer, J.E. (1994c) *Egalitarian Perspectives: Essays in Philosophical Economics*. Cambridge: Cambridge University Press.
Roemer, J.E. (1998) *Equality of Opportunity*. Cambridge: Harvard University Press.
Roemer, J.E. and E.O. Wright (eds) (1996) *Equal Shares*. London: Verso.
Sayer, D. (1987) *The Violence of Abstraction: The Analytic Foundation of Historical Materialism*. Oxford: Blackwell.
Sayers, S. (1989) Analytical Marxism and morality. *Canadian Journal of Philosophy* 15(Suppl.): 81–104.
Schwartz, J. (1993) Functional explanation and metaphysical individualism. *Philosophy of Science* 60: 278–310.
Schwartz, J. (1995) In defence of exploitation. *Economics and Philosophy* 11: 275–307.
Sensat, J. (1988) Methodological individualism and Marxism. *Economics and Philosophy* 4: 189–219.
Skillman, G. (1997) Technical change and the equilibrium profit rate in a market with sequential bargaining. *Metroeconomica* 48: 238–261.
Tarrit, F. (2006) A brief history, scope, and peculiarities of 'Analytical Marxism'. *Review of Radical Political Economics* 38: 595–618.
Udehn, L. (2002) The changing face of methodological individualism. *Annual Review of Sociology* 28: 479–507.
Varoufakis, Y. (1992) Freedom within reason: from axioms to Marxian Praxis. *Science and Society* 56: 440–466.
Veneziani, R. (2007) Exploitation and time. *Journal of Economic Theory* 132: 189–207.
Veneziani, R. (2008a) A future for (Analytical) Marxism? *Philosophy of the Social Sciences* 38: 388–399.
Veneziani, R. (2008b) The rationality of analytical Marxism. In A. Chitty and M. McIvor (eds), *Karl Marx and Contemporary Philosophy*. Basingstoke: Palgrave.
Veneziani, R. (2008c) Exploitation, inequality, and power. COE/RES Discussion Paper Series, No.254, Hitotsubashi University.
Veneziani, R. (2009) Global capitalism and imperialism theory. Methodological and substantive insights from Rosa Luxemburg. *Review of Political Economy* 21: 195–211.
Ware, R. (1989) Introduction. *Canadian Journal of Philosophy* 15(Suppl.): 1–26.
Warren, M. (1988) Marx and methodological individualism. *Philosophy of the Social Sciences* 18: 447–476.
Warren, P. (1997) Should Marxists be liberal egalitarians? *Journal of Political Philosophy* 5: 47–68.
Weldes, J. (1989) Marxism and methodological individualism: a critique. *Theory and Society* 18: 353–386.
Wolff, J. (1999) Marx and exploitation. *The Journal of Ethics* 3: 105–120.
Wolff, R.P. (1990) Methodological individualism and Marx: some remarks on Jon Elster, game theory, and other things. *Canadian Journal Philosophy* 20: 469–486.
Wood, A. 2004. *Karl Marx*, 2nd Expanded edn. London: Routledge.
Wood, E.M. (1989) Rational choice Marxism. Is the game worth the candle? *New Left Review* 177: 41–88.
Wood, E.M. (1990) Explaining everything or nothing? *New Left Review* 184: 116–128.
Wright, E.O. (1985) *Classes*. London: Verso.
Wright, E.O. (1989) What is analytical Marxism? *Socialist Review* 19: 35–56.
Wright, E.O. (1997) *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University Press.
Wright, E.O. (2000a) Class, exploitation, and economic rents: reflections on Sorensen's 'Sounder Basis'. *American Journal of Sociology* 105: 1559–1571.

Wright, E.O. (2000b) Working-class power, capitalist-class interests, and class compromise. *American Journal of Sociology* 105: 957–1002.
Wright, E.O. (2001). An interview with Erik Olin Wright, by Mark Kirby. Available at http://www.ssc.wisc.edu/∼wright/ (last accessed 15 September 2010).
Wright, E.O. (2005) Foundations of a Neo-Marxist class analysis. In E.O. Wright (ed.), *Approaches to Class Analysis*. Cambridge: Cambridge University Press.
Wright, E.O. (2006) Compass points. *New Left Review* 41: 93–124.
Wright, E.O. (2009) Understanding class. *New Left Review* 60: 101–116.
Wright, E.O., Levine, A. and Sober, E. (1992) *Reconstructing Marxism*. London: Verso.
Wright, E.O., Levine, A. and Sober, E. (1994) Historical materialism: theory and methodology. *Science and Society* 58: 53–60.
Yoshihara, N. (1998) Wealth, exploitation and labor discipline in the contemporary capitalist economy. *Metroeconomica* 49: 23–61.