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Methodological issues in theorising the financial,  
economic and social system: realistic and systematic  
abstraction

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# Methodological issues in theorising the financial, economic and social system: realistic and systematic abstraction

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## Abstract

The global financial and economic crisis, and in particular the perceived failure of economics to predict the crisis, has led to questioning of the methodology of economics. Some have championed the methodological approach of 'critical realism' as fostering a more realistic economic theory than that currently predominant. This paper will argue that, whilst critical realism correctly poses the need for *realistic* abstraction, critical realism fails to deliver because it does not offer any aid towards *systematic* abstraction (despite proponents' claims to the contrary). The application of critical realism can readily identify myriad relevant aspects of the crisis (financial, economic, political, social, psychological, local, national, international, short-run, medium-run, long-run and so on). Yet, critical realism precludes any adequate comprehension of how these myriad aspects cohere to constitute the capitalist system as a whole. The paper goes on to argue that critical realism corrupts an approach (appropriately termed 'system abstraction') which can genuinely aid the development of economic theory that is both realistic and systematic. This superior approach aids system-wide theory by offering a step-by-step method that begins with an abstract conception of 'value' and moves towards a concrete comprehension of the world market.

**Key words: critical realism, capitalist system, abstraction, synthesis, value**

Journal of Economic Literature classification: A10, A11, B50, G00, G01, P00



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## 1. Introduction

In the wake of the global financial and economic crisis, the question of methodology has been raised by economists, social scientists, policy makers, the media and within everyday discourse. At least two fundamental issues have arisen: firstly, the justification, if any, for the unrealistic assumptions that have become mainstream in economics and finance, not least the rationality assumption (either perfect rationality or rational expectations) and the efficient market hypothesis; secondly, the issue of theorising the system as a whole has become prominent because the crisis has made evident the interconnections from the US sub-prime mortgage market to the global economic and social system as a whole. Thus there has arisen a desire for research in economics and finance to be both sufficiently *realistic* and *systematic* and the ability of economics to achieve these aims has come under intense scrutiny.

It is natural to consider explicitly 'realist' methodological approaches as providing a realistic alternative to mainstream economic methodology (where Friedman's anti-realist stance remains dominant). One particular realist approach, that of critical realism, has become prominent as a source of critique of mainstream economics and champion of non-mainstream economics, and is focused upon in this paper. The paper will argue that critical realism correctly poses the need for *realistic* abstraction but fails to deliver because it does not offer any aid towards *systematic* abstraction, i.e. it does not help the researcher to theorise the 'big picture', the system as a whole. It is argued, furthermore, that critical realism corrupts an approach termed 'system abstraction' which can genuinely aid development of theory that is both realistic and systematic. The key to this superior approach is the attempt to develop a conception of the system as a whole in a step-by-step method from abstract conception of 'value' to concrete comprehension of the world market (this is a very different understanding of the step-by-step method in economics to the predominant understanding derived from John Stuart Mill). In this way the paper will bring

out fundamental limitations in the critical realist open system ontology and associated methodology, and introduce a superior alternative methodological approach, systematic abstraction, argued to be of general relevance for finance and economics.<sup>1</sup>

The first main section below explains the critical realist approach to mainstream economics and to the financial and economic crisis. The section sketches how the critical realist methodology of hypothesising ('retroducting') specific underlying structures to explain specific events fails to aid comprehension of the crisis of the system as a whole. The next two sections argue that the critical realist 'open system' ontology is a superficial reflection of the chaotic surface appearances of the contemporary economic and social system (i.e. of capitalism). Critical realism precludes any systemic 'vision' – any recognition of the characteristic mode of interconnection of the myriad aspects of the capitalist system – but such a vision is essential to economic theory. The final main section of the paper discusses the superior approach of systematic abstraction. It explains how, according to systematic abstraction, comprehension of the financialisation and crisis of the capitalist system can be aided through step-by-step development from abstract conception of value to concrete comprehension of the world market. Conclusions follow.

## **2. Critical realism, mainstream economics and the crisis of the system as a whole**

Lawson (2009) develops critical realism-inspired reflections on the recent global financial and economic crisis that offers an excellent introduction to critical realism in economics. According to Lawson, critical realism addresses philosophical and methodological issues that can help 'clear the way' for better economic theory and empirical analysis but critical realism does not itself undertake economic theory and analysis. In other words critical realism is an 'under-labourer' for finance, economics and the social sciences. This means that critical realism has nothing substantive to say about the global financial and economic crisis *per se* but it does have plenty to offer at the level of methodology. Consider, firstly, Lawson has to say about the methodology of mainstream economics in wake of the crisis.

### *Unrealistic 'closed system' approach of mainstream economics*

Lawson (2009) argues that the crisis shows the inappropriateness of mainstream economics. Against those such as Collander et al. (2009) and Davis (2008) who have highlighted theoretical shifts in mainstream thinking accelerated by the crisis (for example, behavioural economics, neuroeconomics, happiness economics, evolutionary game theory, agent-based complexity economics, experimental economics) Lawson argues that whatever the variety in terms of theory, the methodology of mainstream economics has remained fundamentally unaltered and unquestioned before, during and after the onset of the crisis. This methodology consists, according to Lawson, in an insistence on mathematical or econometric modelling on the part of mainstream economics. In other words it is an insistence that valid explanation in economics must always include mathematico-deductive reasoning. Lawson draws upon critical realist philosophy to argue that this insistence has vitiated the ability of mainstream economics to theorise the crisis. The problem is not the use of mathematics *per se*. Rather, the problem is the unrealistic 'closed system' assumptions that are generally necessary to construct a tractable mathematico-deductive model in economics. On Lawson's critical realist analysis these closure assumptions generally imply a world of atomistic individuals, unlike the real world of social structures, mechanisms and agents.

Lawson's argument raises and connects two issues: firstly, the use of mathematics in economics and secondly the issue of the need for more realistic assumptions in economics. It is fair to say that it is the second issue that has gained most prominence in the wake of the crisis. The standard defence to the charge of a lack of realism is Friedman's (1953) argument that prediction not realism is the goal of economics but this defence has been dealt a severe blow by the perceived failure of economics to predict the crisis. What, then, according to a critical realist approach, would a more realistic economics look like?

### *The 'open system' approaches of non-mainstream economics*

Lawson (2009) draws on critical realism to argue that, unlike mainstream economics, the crisis has helped demonstrate the vitality of non-mainstream economics. Through Lawson's critical realist lenses, non-mainstream economics consists of 'open system' approaches such as that of Keynes (as understood through post-Keynesianism), Veblen and Marx that are able in different ways (and with different points of focus) to facilitate understanding of the crisis precisely because they do not insist upon mathematico-deductive reasoning and so are not sucked into unrealistic closure assumptions. Lawson gives the example of how the crisis has brought to light the immense causal significance of the vast global network of creditor - debtor relationships constitutive of the financial world. A key contribution of critical realism, argues Lawson, is to affirm the ontological status of such sets of relationships as constituting causally potent 'social structures', irreducible to, though reproduced or transformed by, the activities of individuals and groups that they constrain and facilitate (see the subsequent section below for further elaboration of the critical realist notion of 'social structure'). According to Lawson, such an understanding of ontologically irreducible financial structures is to be found in non-mainstream economics in contrast to the standard methodological (and ontological) individualism of mainstream economics that traditionally lacks the very concept of 'social structure'.

Lawson argues that non-mainstream economics approaches follow the very general critical realist method termed 'retroduction'. This means that they undertake hypotheses of specific underlying social structures and mechanisms in order to explain notable or surprising events in the open system of reality, without the mainstream blanket insistence on the use of mathematics and the associated closure assumptions. Lawson is able to demonstrate that retroduction has some surface applicability as regards the financial crisis. For example, the crisis of bank liquidity from 2007 (immediate appearance) can be hypothesised ('retroduced') to be due to failings of, *inter alia*, the development of the sub-prime mortgage market in the US with the proliferation of securitised loans (an 'underlying

social structure' that explains the immediate appearance). Still 'deeper' structural causes or conditions of the proximate causes initially unearthed can readily be identified. For example, there are a whole host of aspects that critical realism could incorporate as deeper underlying structures and mechanisms at work in the crisis: the financial deregulation of past 30 years, the collapse of the Bretton Woods agreement, the influence of shifting technological-economic regimes, the role of state and central bank, the shifting relation of finance to production, the role and impact of political economic developments in regions and nations, the influence of individual psychology, etc., etc. Thus myriad relevant factors can readily be identified and characterised in critical realist terms as underlying structures and mechanisms. Yet, a problem looms. How do these myriad individual structures and mechanisms interrelate to form the economic and financial *system* as a whole, and the crisis therein?

#### *Dichotomy between being realistic and systematic?*

As noted above, in media and popular discourse on the crisis it is precisely this *system* failure that is stressed. It is 'economists' who are asked to explain the economic system and its failings. How, then, do economists answer these questions? How should they do so? What methodological help is available? These are clearly vital questions but the issue of how to grasp the system as a whole is not one towards which the critical realist methodology of retrodution offers any help. For system-wide theory, as opposed to the theory of a local and specific case or event, then no longer is there a single surprising occurrence to be explained via hypothesis of an individual structure or mechanism. Rather, there are myriad known structures, mechanisms and events such as those listed above in relation to the crisis. In order to understand the system as a whole, and the crisis therein, we primarily aim to fathom the mode of interconnection of the system, the contradictory role (function and dysfunction) of its myriad aspects. This is a matter of synthesis or integration of a given complexity, rather than, as in critical realism, the analysis and abstraction of a hypothesised individual underlying structure. The critical realist stress on



the realistic depiction of individual structures and mechanisms does not offer any aid to the realistic comprehension of the system overall. An unhelpful dichotomy between realistic and systemic abstraction is thereby encouraged.

However, notwithstanding this apparent *methodological* weakness, critical realism does claim to offer an *ontological* account of synthesis based on the key notions of 'stratification' and 'emergence'. Critical realists such as Lawson (2009) claim that the critical realist notion of stratification can aid in integration or synthesis as regards concrete matters such as the financial economic crisis. Jessop's 'method of articulation' and his 'strategic relational' approach similarly claim to aid integration or synthesis based upon critical realism (e.g. Jessop 2002). It is not just directly in the area of finance and the crisis that critical realists draw on the ontological notion of stratification to make this claim. Brown (2013a), for example, has discussed recent claims of synthesis or integration made in the name of critical realism by leading scholars in the related fields of industrial relations studies, (Edwards 2005) labour process theory, (Thompson and Vincent 2010) management and organisation studies, (Tsoukis 2000, Reed 2000) the sociology of work (Ackroyd 2000) and labour market studies (Fleetwood 2010). As a typical example, Thompson and Vincent (2010) offer a "crudely divided" diagram (Diagram 1) of "the political economy of capitalism as a series of stratified entities" (2010: 63) – the basic *form* of this diagram is found in many other critical realist contributions. Clearly, if we are to get to the bottom of the issue of realistic and systemic abstraction we must probe the critical realist notion of stratification. This will entail more detailed consideration of the heart of critical realism, the critical realist ontology.

DIAGRAM 1 ABOUT HERE

### 3. Critical realist ontology of 'stratification' and approach to synthesis

The root of the claims regarding synthesis made by Lawson, Jessop and various scholars cited above can be traced to the basic critical realist conception of the natural world, first systematised by Bhaskar (1978) and subsequently modified and transferred to the social world (Archer et al. 1998).

### *Emergence and stratification*

According to critical realism scientists study 'emergent' powers and the structures by virtue of which these powers exist. Consider, for example, the bottle of water on my desk. Science has discovered that the powers of water are due to a particular structure of hydrogen and oxygen (H<sub>2</sub>O). These powers are 'emergent' because they are irreducible to the respective powers of hydrogen and of oxygen taken in isolation: water boils at 100 degrees Celsius and will put out a fire, whereas oxygen is flammable with a boiling point of minus 183 degrees Celsius.<sup>2</sup> In general, having satisfactorily explained a set of powers at one 'level', e.g. that of molecules, then scientists try to explain powers at the next level, e.g. that of atoms. Thus, for critical realism, the natural world is 'stratified' into multiple levels or strata (molecular, atomic, sub-atomic etc.) and *sui generis* ('of their own kind') emergent powers are associated with discrete structures at each level.

### *Experimental abstraction, concrete synthesis*

According to critical realism, 'abstract' sciences use, where possible, experimental control to aid in the study of particular kinds of structure and associated power. An experiment physically isolates a power of interest in order to produce a significant event regularity. For example, the creation of a vacuum enables repeated observation of the acceleration due to gravity, unimpeded by air resistance. The role of *abstraction*, then, is to remove or put into the background extraneous factors in order to focus upon a specific kind of power and its underlying structural cause. By contrast, for critical realism, 'concrete' sciences study multiple structures and associated powers in spontaneous arrangements ('open systems') outside the 'closed system' of scientific experiment. The role of *synthesis*, then, is to

combine separate theories of structures and associated powers in order to explain concrete events. For example, a meteorologist would have to combine knowledge of water, cloud formation, air pressure, temperature, etc. to explain a particular occurrence of rainfall.

### *Application to the social realm*

For critical realism as explicated in Bhaskar (1989)<sup>3</sup> social structures are based on relations between social 'positions' such as the relation between (the position) husband and (the position) wife, or between landlord and tenant, or between employer and employee, or, as noted above, between creditor and debtor. Critical realism conceives of social relations as constraining and facilitating the agents who 'slot' into social positions. Like natural structures, social structures are relations by virtue of which powers emerge and, in the case of social structures, these powers constrain and facilitate social activity.<sup>4</sup> Unlike natural structures, social structures are reproduced or transformed through the very activities of the agents that they constrain and facilitate:

[P]eople do not marry to reproduce nuclear family or work to reproduce the capitalist economy. Yet it is nevertheless the unintended consequence (and inexorable result) of, as it is also a necessary condition for, their activity. (Bhaskar 1989: 35)

'Compensators' for the general inability to perform social scientific experiment are proposed within critical realism (Bhaskar 1989: 47, Lawson 1997: 247-74). It is in this context that the very general method of 'retroduction' (introduced in the previous section above) is developed. Lawson argues that rough patterns of events ('demi-regularities') may spontaneously occur when two otherwise similar objects differ in respect of just one mechanism. He gives the example of the regular occurrence of higher productivity in Germany than in the UK over periods during the twentieth century. When an underlying mechanism 'shines through' in this way scientists can hypothesise ('retroduce') what it might be. Lawson himself hypothesises that different respective structures of industrial

relations in Germany and the UK explain the observed productivity differential. Of particular importance is the structure–agency relationship, where Archer’s (e.g. 2003) development of critical realism-inspired methodology recommends analytical separation of social structures and agents to examine their interplay through time.

We are now in a position to explain the claims regarding synthesis made for critical realism discussed in the previous section above. Let us take the example of the Thompson and Vincent diagram (Diagram 1) of social stratification, since as noted above it is typical of critical realist contributions and so of general relevance. The ‘strata’ depicted by the boxes in the diagram are in a hierarchy of composition: the plural subjects are within groups, groups are within the workplace, the workplace is within the value chain and so on. This mirrors natural stratification where atoms are within molecules which are within cells. Also mirroring the critical realist approach to natural science is that the diagram is intended to help the researcher understand local and specific events (for example within an individual firm) as the outcome of the contingent interaction of multiple powers. Separate or *abstract* respective theories of agents, groups, the labour process, and broader structures (the value chain, and the regime of accumulation) represented in the diagram can all be brought to bear, or *synthesised*, in terms of the notion of causal powers contingently combining to generate events in a local and specific case. The social structures take effect through constraining and facilitating the actions of agents (the downward arrows of ‘structural conditioning’ in the diagram), and the actions of agents reproduce or transform these structural conditions (the upward arrows in the diagram).

#### **4. Why critical realism hinders comprehension of the crisis**

Despite its superficial appeal, there are deep flaws in the critical realist open system ontology of stratification and emergence. These flaws emerge when switching from an individual perspective to that of the financial and economic system as a whole, and the crisis therein. What superficially appear as self-contained structures and powers are

nothing of the sort when taking a system-wide, long-run point of view. 'Realistic' abstraction at the level of immediate appearances is not the same thing as 'realistic' abstraction at the level of the system as a whole. This is best seen by way of examples.

The significance of money for comprehending the financial and economic crisis is undeniable. Money is a powerful object in my pocket and in my bank account – I need its power in order to purchase my needs and wants. However, a moment's reflection reveals that the money in my pocket is not a self-contained structure. Money possesses its power of immediate and universal exchangeability only as part, and by virtue, of a system of commodity production where a generalised acceptance of money has emerged. Unlike the water on my desk (defined as H<sub>2</sub>O) I cannot define the money in my pocket apart from the wider system of commodity production. Yet it is also the case that I cannot define money in abstraction from its immediate appearance. Money necessarily appears as a discrete thing, actual (in a pocket) or virtual (in a bank account), that is how all individuals across the system perceive it, and how money takes effect. What does this mean for critical realism? The researcher solely interested in a case study of, say, a specific firm can temporarily abstract from such issues as the nature of money, and simply treat the money empirically encountered as a local and specific power. However, the researcher interested in the nature of money (as any researcher of the crisis must be) will be misled by critical realism because, on reflection, money is not a discrete structure contingently interacting with other discrete structures and agents to generate the flux of events in an open system. Rather, money cannot be defined apart from the system of commodity production and from some typical activities and appearances within that system (the activities and appearances of commodity production and monetary exchange).

Next take the example of the capitalist firm, another key constituent of capitalism and the crisis therein. Like money, a firm superficially appears to have a distinctive power (in this case the power to make profit) by virtue of its intrinsic local and specific structure, in tune

with the critical realist ontology. This is how Fleetwood (2012) describes the firm (what he terms the 'company') – as a particular kind of local and specific structure, self-contained and in this sense like H<sub>2</sub>O. However, profit is a monetary gain achieved through commodity purchase and sale. Accordingly a definition of the capitalist (profit-making) firm must include money and commodities and these must, as we have seen, be taken to include the system of commodity production. Therefore, like money, only in a more complex way, the capitalist firm possesses its characteristic power by virtue of the system of which it is part, not merely by virtue of its own internal structure. From this system-wide perspective the firm is not a discrete, self-contained structure within an open system of many such structures. It is analytically inseparable from (cannot be defined apart from) the generalised presence of money, commodities, profits and associated activities of individuals and groups across the system. The critical realist open system ontology of separately definable and in this sense discrete, self-contained entities resonates with the immediate appearances of a capitalist firm but not with the wider system of which the capitalist firm is, on reflection, necessarily a part.

Finally consider the key category of 'capital'. The financial crisis has made evident the degree and depth of the relations across the globe established through flows of what is termed 'capital'. Capital appears everywhere, recognised in finance as investment funds (traded in the capital markets) and in economics as physical means of production. The state too is inseparable from the thicket of relationships associated with capital, e.g. as a key player in the financial markets. Thus, whatever it is, capital is not a discrete structure interacting with others in an open system. In this system capital (which itself includes commodities and money) must be included in the definition of key structures, institutions and agents, inclusive of the capitalist firm and the capitalist state. Conversely the latter are necessary parts of capital (e.g. the system-wide predominance of capital necessarily requires the system-wide presence of capitalist firms). In short, it is not possible to define or comprehend any characteristic feature of the capitalist system as a self-contained

structure or power, even where it immediately appears as such. To fully define any such feature, be it wages, profits, commodities, money, value or capital, requires defining them all. These features constitute, in other words, a historically specific *totality* known as capitalism.

Critical realism sometimes appears to allow for a similar line of reasoning, stressing that society is an internally related 'totality' (Bhaskar 1989: 44). Yet critical realism fails to recognise that its open system ontology of multiple separable structures and powers must be replaced in order to comprehend the capitalist system as a totality. As a result the critical realist problematic, revolving around the need to 'compensate' for the inability to experimentally engineer social event regularities, is entirely misplaced when considering the capitalist system as a whole. In fact the persistence of the capitalist system necessarily requires the occurrence of strict social or collective event regularities involving collections of individuals across the system. For example, if the system is to persist there *must* be regular monetary transactions across the system as a whole, affirming the generalised acceptance of money, and enabling the necessary distribution of resources. Similarly there *must* be a sufficient number of firms making profit across the system if the system as a whole is to persist. A sufficient degree of profit making across the system is a strictly regular occurrence. *Contra* critical realism, capitalism does not just occasionally 'shine through' an otherwise chaotic flux of events but, if it is to persist, it necessarily impresses itself upon the form of our most basic everyday economic activities, as do the structures and everyday appearances of this system, such as commodities, money, capital, state, foreign trade and world market (Brown 2007, Roberts 2006).

Let us be clear. The researcher of a local and specific site who, following critical realism, attempts to hypothesise a specific underlying structure or to 'reproduce' real causes or conditions is potentially providing useful information. We are never going to find out about the system as a whole without local and specific enquiry. Yet, being in this sense 'realistic'

at the level of individual case study is a far cry from developing a realistic theory of the system as a whole – and it is just such a theory that is required to comprehend the financial and economic crisis. There is necessity for an alternative to critical realism when it comes to synthesising the results of local and specific cases to grasp the system as a whole. The critical realist injunction to hypothesise from a specific demi-regularity becomes useless when trying to fathom a system of myriad strict regularities. The critical realist injunction to uncover the causes or conditions of existence of a given appearance leads us on a wild goose chase when trying to comprehend a system of myriad mutual conditions of existence. The critical realist injunction to analytically separate structures from one another and from agents is misplaced when studying the myriad analytically inseparable structures, forms and activities definitive of the system: making profit, earning wages, paying interest, paying rent, exchanging commodities etc. The key question from a system-wide perspective is: How can we comprehend capitalism if its myriad parts are analytically inseparable? By illicitly cleaving social structures from one another and from social activities, and so highlighting fleeting demi-regularities, the critical realist open system ontology obscures the very question rather than helping to answer it.<sup>5</sup>

There is an irony in the critique of critical realism developed above. Critical realism is found to be lacking in the very aspect that is crucial to financial and economic theory: the theory of the system as a whole. Critical realism cannot overcome the dichotomy between being superficially ‘realistic’ at the level of individual structures or mechanisms (which it encourages) and being realistic at the level of the financial, economic and social system as a whole (which its open system ontology inadvertently precludes). Yet, the key and characteristic aspect of any financial and economic theory is precisely its theory of the system as a whole. For all their differences, both classical political economy and neoclassical economics each respectively offer a system-wide theory or ‘vision’ of the economy (and the wider social system in the case of classical political economy) (see Brown and Spencer 2012). In the case of classical political economy its vision *inter alia*



leads to a characterisation of endogenous crisis tendencies of the system. In the case of neoclassical economics its vision *inter alia* leads to a theory of harmonious market equilibrium from which a crisis can be characterised as an exogenous perturbation. There is no place in critical realism for the notion of an abstract 'vision' of the system as a whole (except as denoting yet another structure amongst myriad others). To find an adequate characterisation of such a notion requires going beyond critical realism and taking into consideration 'systematic abstraction'.

## 5. Systematic abstraction, financialisation and the crisis

'Systematic abstraction' has been for the most part developed as central to an exciting and distinctive interpretation of both Hegel and Marx. However, elsewhere (Brown and Spencer 2012; see also Reuten 2004) it has been argued that systematic abstraction provides a hitherto little-known understanding of a familiar methodological approach in economics: the step-by-step method, or 'method of approximation'. Brown and Spencer argue that systematic abstraction provides an understanding of the step-by-step method that is radically different from that associated with John Stuart Mill but has remarkable similarities to that of Lionel Robbins (1932) (such that it is quite wrong to assimilate Robbins's and Mill's respective methods of approximation, *contra* standard interpretations such as that of Hausman (1992)). Below we will present systematic abstraction, in contrast to critical realism, as combining realistic and systematic abstraction in the manner required for the study of financialisation and the crisis. (Previous authors who have contrasted systematic abstraction to critical realism include Brown (2007, 2008), Brown, Slater and Spencer (2002) and Roberts (2006, 2001)).<sup>6</sup>

Systematic abstraction has three stages: starting point, method of enquiry and method of presentation. The difference of perspective between systematic abstraction (system-wide perspective) and critical realism (resonating with a local and specific perspective) is immediately revealed in the different respective starting points that they recommend. For

systematic abstraction the starting point is not a particular demi-regularity, or individual form or pattern, as is the case for critical realism. Rather, the starting point for systematic abstraction is the entire object realm to be studied, namely capitalism. Accordingly the method of enquiry is not 'retroduction' or hypothesis of a particular mechanism, as it is for critical realism. Instead the method of enquiry appropriates in detail all relevant descriptions, analyses and theories for the domain of study. Relevant material will, for example, include the results of local and specific case studies of the sort that resonate with the critical realist approach (the comprehensive research programme of FESSUD will *inter alia* add further rich material for the method of enquiry). The method of enquiry reveals the presence of a historically specific totality, viz. capitalism. The next step is to try to properly comprehend this totality – here the third stage of systematic abstraction, the method of presentation, is crucial.

Let us explain the method of presentation through the example of Marx's *Capital*, the most well-known text to employ systematic abstraction. The method of presentation *develops* from abstract to concrete in step-by-step fashion. The simplest and most abstract way of thinking about capitalism is as a system where commodity production is undertaken privately for the purpose of exchange. Marx notes that, within this system, it is the value of commodities in the sphere of exchange that regulates the social division of labour, there is no direct social regulation of production. In light of this, Marx argues that two-way barter exchange or even widespread commodity exchange will not *per se* suffice to make the value of commodities an effective regulator of the social division of labour. Effective regulation requires money. Only by becoming visible in money can the value of commodities effectively influence private producers, sustaining the social division of labour. Money is therefore introduced into the presentation as the necessary appearance form of value. Upon introduction of money we reach a slightly more complex and concrete expression of the capitalist system. The presentation *retains* and *develops* rather than discards the prior



the level of an individual site – they offer systemic context for myriad further complex and concrete *developments*. In contrast to critical realism, they help contextualise local and specific activities and appearances (involving specific occurrences of commodity, money, capital, labouring, profit-making etc.) in terms of their significance for the development of the capitalist system.

To bring out further the contrast with critical realism, consider the importance placed by systematic abstraction on value theory in economics. Through the lenses of critical realism, the emphasis on value theory appears as a claim for the importance of one particular structure termed ‘value’ over all others – a debateable claim of limited relevance to realistic individual case study research. Through the lenses of systematic abstraction the claim is very different. The claim is that the value of commodities is the most abstract and simple expression of the way in which the capitalist system coheres, an expression that is retained and developed in the journey from abstract to concrete. The method of presentation traces the development of value through different guises (including value chains, capital, valorisation, labouring activity and associated inner conversations in Diagram 1), helping to unravel mediating links from individual cases to the capitalist system as a whole. These links help individual case study analysis and system-wide theory mutually to inform one another; they facilitate, and reveal the necessity of, combining realistic with systematic abstraction. By contrast, the recommendation of critical realists to label myriad aspects (e.g. gender, ethnicity) and items at different levels (e.g. industrial, national, supranational) as discrete ‘structures’ or ‘strata’ alongside the discrete ‘structure’ of value, (if value is recognised at all) shows unawareness of the development of value from abstract to concrete, obscuring complex links between individual sites and the wider capitalist system, so blocking the dialectic between individual case study analysis and systemic synthesis that is essential to social research.

Systematic abstraction offers genuine help in comprehending the financial and economic crisis. The hierarchy from abstract and simple to ever more concrete and complex categories helps the researcher of the capitalist system to locate and order historically specific tendencies and countertendencies at different levels of abstraction. These will include crisis tendencies. To take a well-known but much misunderstood example, the law of the tendency of the rate of profit to fall is not a prediction of the inevitable demise of capitalism through an inexorable secular fall in the profit rate (as in vulgar interpretations), nor is it simply a theory of multiple ‘free floating’ tendencies and countertendencies (as implied by critical realism). Rather, it draws together multiple tendencies and countertendencies in an *ordered* way, with each tendency and countertendency being located within the hierarchy from abstract to concrete, thereby revealing the likelihood of cyclical crises in the development of capitalism, crises that could take many possible forms (Fine 1992, Reuten 2004). Empirical work on the recent crisis and ensuing ‘great recession’ is therefore invited and informed by the hierarchy, helping to ensure that no aspect is overlooked and each is properly located within the system overall. Contemporary analysis of the crisis by political economists influenced by systematic abstraction richly exemplifies this aspect of systematic abstraction (See Fine 2012 for a contribution and further references).

Systematic abstraction can also help to characterise distinct regimes of accumulation. For example, is the regime of ‘financialisation’ of the past thirty years or so characterised by ‘financial exploitation’ as some have argued (see Brown 2013b)? Systematic abstraction can help to address this question, firstly, by distinguishing between the method of enquiry and the method of presentation: the notion of ‘financial exploitation’ may be appropriate for the method of enquiry but not for the method of presentation (see Brown 2013b). Secondly, systematic abstraction can help locate ‘exploitation’ at different levels of abstraction: (i) an abstract level where surplus value is initially introduced in the presentation (third column, second bullet point in Figure 2); (ii) a more concrete level where finance and banking have

been introduced (roughly the level of ‘interest’ in column three of Figure 2) and (iii) the much more concrete level of the US sub-prime mortgage market before and during the crisis (a level presupposing all of Figure 2 and many further developments). Brown (2013b) argues that, at a very abstract level, a systematic loss of wage income due to interest payments implies a reduction of the value labour-power. However, at the very concrete level of the US sub-prime mortgage market, Brown argues (following Fine 2012) that there could simply have been a shift in the form in which surplus payments were made: many sub-prime mortgage holders were formerly tenants so what had hitherto been rent payments to landlords could have become interest payments to mortgage lenders, with no change in the value of labour-power. A loss of wage income due to interest payments thereby could have different implications at different levels of abstraction. Thus systematic abstraction encourages awareness of the complexity of the development from abstract to concrete that can otherwise cause confusion when characterising regimes of accumulation.

## **6. Conclusion: systematic vs. ‘pseudo-systematic’ abstraction**

Using the example of the financial and economic crisis, this paper has offered a critique of critical realism and presentation of an alternative – systematic abstraction. The paper has stressed the distinct nature of the system as a whole. In contrast to immediate appearances the capitalist system, when seen from a system-wide and historical perspective, is not open but displays regular systemic or collective activities. The commodity form of value is not just one structure amongst many, it offers the theorist an initial orientation towards this system, it is the first step in grasping how the system integrates multiple aspects and levels. If one does not start with value, one cannot comprehend any regime of capital accumulation – indeed one cannot even comprehend money, let alone financialisation and the crisis. Yet, there is no notion in critical realism of how a simple and abstract structure could be developed to help comprehend a complex system. As a result, despite its superficial appeal for individual case study research, the critical realist notion of an open social system encourages vague conceptions of free

floating social structures, obscuring their internal relations with one another and with the activities of agents. Critical realists claim their approach to synthesis is at one with Marx's (Archer et al. 1998, Brown, Fleetwood and Roberts 2002). Yet, by overlooking the systemic significance of value, applications of critical realism offer a 'pseudo-systematic' approach that ironically reproduces the very chaotic conceptions of the system that it claims to eschew.

The paper has argued that systematic abstraction offers a hitherto little-known understanding of the step-by-step method in economics (different to the standard understanding derived from John Stuart Mill) that is able to help meet the requirement for economic theory to be both realistic and systematic. It is hoped that research in the FESSUD project can fruitfully draw upon systematic abstraction, in developing a theory of financialisation and the crisis that meets both of these essential criteria.

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Notes:

1. It is hoped that a development from critical realism to systematic abstraction will ultimately be welcomed by those people, currently calling themselves 'critical realists', but who wish to divorce themselves from three controversial aspects of critical realism: (i) Bhaskar's (1993) development of 'dialectical critical realism', which is in fact a fully blown pseudo-dialectics built upon the critical realist corruption of systematic abstraction uncovered in this paper (Brown 2002, Roberts 2001; see Ehrbar 2007 for a contrary view); (ii) Bhaskar's (2000) subsequent development of 'transcendental critical realism', where he turns to new age philosophy, embracing such themes as reincarnation; (iii) engagements in debates regarding the existence of a transcendent God; belief in such a God being argued to be consonant with critical realism by three other leading critical realists (Archer, Collier and Porpora 2004).

2. We tend to think of any chemical element (hydrogen, oxygen, etc.) as having an unchanging nature but, as noted above, neither hydrogen nor oxygen retain their characteristic powers when they are constituents of water. Accordingly, hydrogen and oxygen are said to be 'internally' related as constituents of water (though not as isolated elements). In general an internal relation is one that is necessary to the nature of the items related.

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3. Bhaskar (1989) remains the seminal text despite ongoing debate – see, e.g., Archer (2003) and Elder-Vass (2010).

4. The relations in question are ‘mutual’ or ‘symmetrical’ internal relations. Some rather technical definitions are in order here (though they can be safely skipped by the non-specialist): a ‘symmetrical’ internal relation holds where the nature of both related items depends on their relation (see the examples in the main text). By contrast an ‘asymmetrical’ internal relation holds where the nature of only one of the related items depends on their relation (for example, the structure of a house depends on the nature of gravity but not vice versa). An ‘external relation’ does not affect the nature of either of the related items (e.g. the relation between passers by on the street).

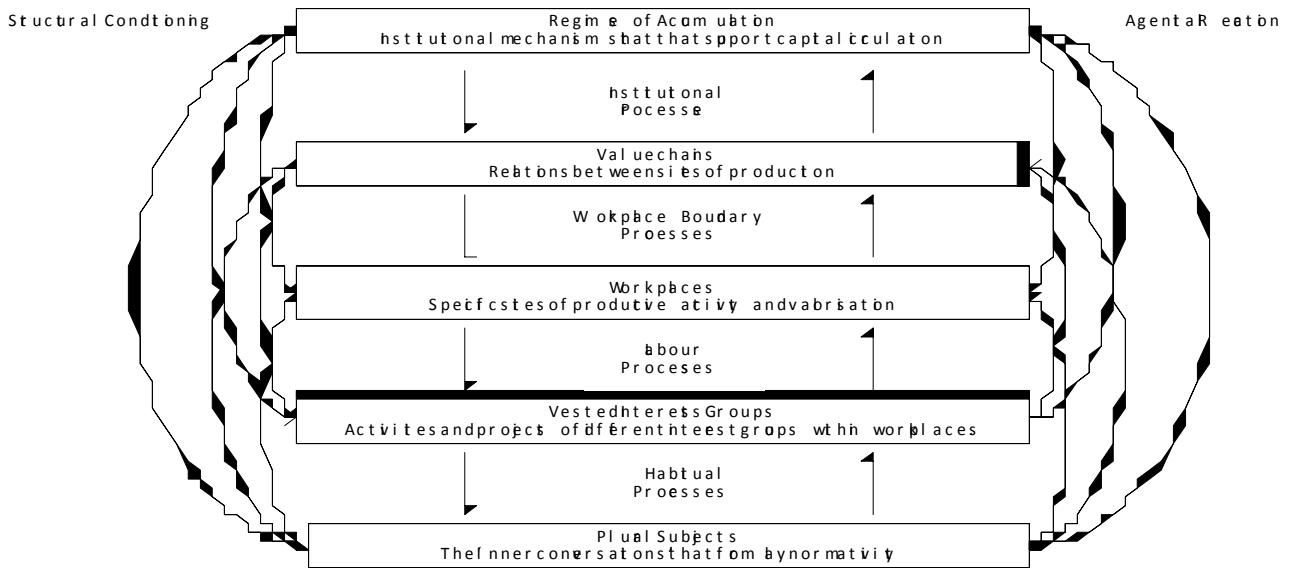
5. Lawson (2003) now recognises that ‘quite’ strict event regularities are to be found when taking a system-wide perspective and explicitly confines the methodology based on demi-regularities to a more concrete perspective (see Brown 2007). He thereby could be seen as leaving open the question of what methodology is appropriate for system-wide theory – could that methodology involve systematic abstraction?

6. Essentially the same contrast is made by Murray’s (1983) critique of Sayer’s (1983) realist interpretation of Marx’s method. The most prolific application of systematic abstraction in political economy is the work of Ben Fine (see below). For different perspectives on critical realism and systematic abstraction see Albritton (2007), Ehrbar (2007) and Engelskirchen (2011).

7. Indeed systematic abstraction is part and parcel of path-breaking work on subjectivity, in particular the work of Russian thinkers such as Vygotsky, Leontiev and Ilyenkov (drawing on Spinoza, Hegel, Engels and Marx) (see Bakhurst 1991 for a cogent introduction).

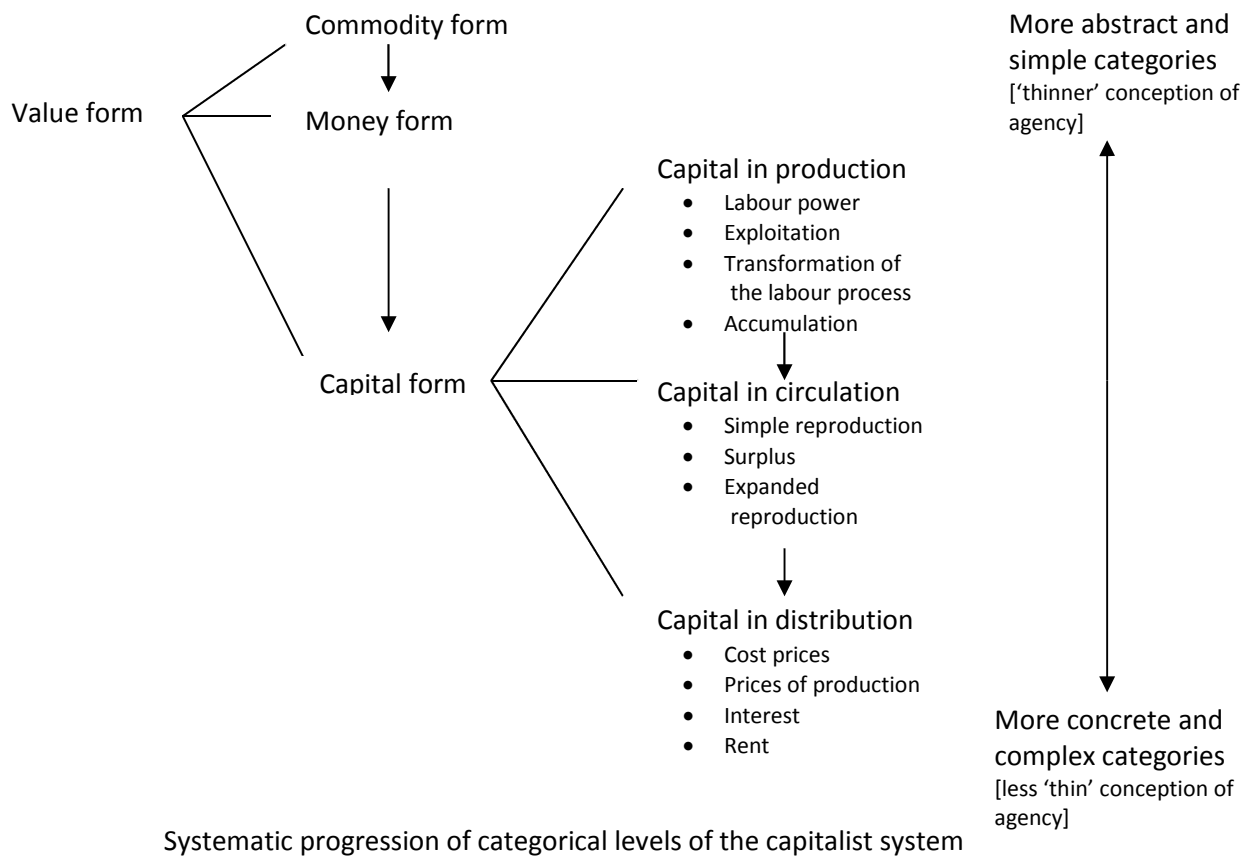


Diagram 1 (from Thompson and Vincent 2010: 63)



The political economy of capitalism as a series of stratified entities

Diagram 2 (adapted from Smith 1990: 209–10 and Smith 1993: 24–25)



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## **THE ABSTRACT OF THE PROJECT IS:**

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?

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