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**STRUCTURE, AGENCY, AND EMERGENCE IN SOCIO-ECONOMIC  
LIFE: Hayekian Perspective and Bergerian Perspectives**

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# STRUCTURE, AGENCY, AND EMERGENCE IN SOCIO-ECONOMIC LIFE: HAYEKIAN PERSPECTIVE AND BERGERIAN PERSPECTIVES<sup>1</sup>

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## 1. INTRODUCTION

The relationship between social structure and human agency is one of the central problems of social science. At the heart of the problem lies a key question concerning the nature of the social world, namely: Does society amount to nothing more than an aggregation of individuals, or does the interaction of those individuals give rise to *sui generis* properties the existence of which implies that there is more to social life than people alone? Such ontological issues are often thought to be bound up with epistemological and methodological ones, centering on the most appropriate means for gaining knowledge of the social world and explaining social phenomena of interest. The stakes could hardly be higher, then, for the structure-agency debate concerns what are arguably the most fundamental issues addressed by social scientists, namely how we conceptualize, explain and thereby gain knowledge of the social world.

Two of the most prominent and long-standing conceptions of the relationship between social structure and human agency centre on attempts to reduce one to the other. Purely individualistic accounts, exemplified by orthodox rational choice theory and Weberian sociology, strive to show how social structures are reducible to the actions of human agents, being created *ex nihilo* by the latter. At opposite polar extremes can be found approaches, such as Durkheimian sociology and some varieties of Marxism, that portray people as mere puppets whose actions are completely determined by their social environment, thereby rendering human agency no more than an epiphenomenon of social structure.

Both of these approaches are unsatisfactory for a variety of reasons, prominent amongst which is the fact that neither seems able actually to achieve their avowed reductionist goal. Ostensibly individualistic approaches seem incapable of eschewing all references to social structures, often invoking social structures as causally efficacious, and explanatorily irreducible, elements of their accounts of social phenomena (Nozick 1977; Hodgson 2007; Lawson 1997: 57; Lewis 2005a). In a similar vein, advocates of extreme forms of collectivism typically smuggle intentional human agency back into their analyses of social phenomena by anthropomorphically endowing collective wholes with wills and purposes of their own, as for example in the case of

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some sort of Hegelian super-mind, thereby treating them as if they were a form of individual (cf. Mises [1949] 1966: 43; Hayek 1952a: 100-02).

The continued failure of attempts to reduce social structure to human agency, or *vice versa*, testifies to the limitations of one-sided approaches to social science and has prompted a variety of attempts to find a sustainable middle-ground between such reductionist extremes. One important and influential attempt to stake out that middle ground has set out over a number of years by Peter Berger. Berger and his associates, such as Thomas Luckmann, see themselves as integrating the key insights of the Weberian and Durkheimian approaches, namely that society is produced by subjectively meaningful human activity and yet appears also to possess objective, things-like status (1966: 28-30). As Berger writes:

At the core of this theoretical perspective is the determination to take full cognizance of the objective and subjective side of human social experience ... Any sociological theory that denies the one or the other side of this tension cannot do justice to the empirical reality of human social life. (Berger 1980: 222)

The rationale for this approach is clearly stated:

The micro-world and what goes on within it only makes full sense if it is understood against the background of the macro-world that envelopes it; conversely, the macro-world has little reality ... unless it is repeatedly represented in the face-to-face encounters of the micro-world. (Berger and Berger 1978: 18-19)

Through their dialectical analysis of the interplay between social structure and human agency, then, Berger and his colleagues strive to build a bridge between the micro-social world of face-to-face interaction and the macro-social world of social structures that does justice to both those facets of social reality.

This paper takes up the quest for a sustainable middle ground, to the pursuit of which Berger and his associates have contributed so notably. The approach considered here is that provided by critical realism. Like Berger, proponents of critical realism are determined to avoid the reductionist extremes of voluntarism/individualism (according to which social structure is ontologically reducible to human agency, being created *ex nihilo* by the latter) and determinism/collectivism (which portrays people's actions as being determined by, and so being ontologically reducible to, social structure), preferring instead to view social structure and human agency as ontologically distinct, but mutually related, elements of social life. More specifically, according to critical realism's transformational model of social activity, human agency and social structure are recursively related—each is both a precondition for and a consequence of the other—and dynamically interactive: People continuously draw on (pre-existing) social structures in order to act, and their actions (subsequently) lead either to the reproduction or the transformation of those structures. On this view, neither social structure nor human agency has ontological or analytical priority over the other. Explaining some social phenomenon of interest involves the identification not only of the practices responsible for it but also of the social

structures that facilitate those practices, along with any unconscious psychological factors that motivate them (Archer 1997; Lawson 1997).

A key notion in the critical realist account, upon which this paper will focus, is that of “emergence.” The latter concept denotes the possibility that, when certain elements or parts stand in particular relations to one another, the whole that is formed has properties—including, as we shall see, the causal power to make a difference to the course of events—that are not possessed by its constituent elements taken in isolation. As we shall see, the notion of emergence is significant for understanding the relationship between social structure and human agency because, by suggesting that both social structure and human agency have their own, *sui generis* causal powers, and that these powers interact to produce actual events, it enables us to conceptualize how structure and agency can causally influence one another without one being reduced to an epiphenomenon of the other: Social structures possess the emergent causal power to shape human action but, because individual people possess their own *sui generis* causal powers of human agency, it does so without completely determining their actions or reducing them to cultural dupes since they maintain the (emergent) causal capacity to do otherwise.

The notion of emergence is set out in Section 2 of the paper. The following two sections of the paper illustrate the significance of emergence by arguing that that concept is one that the Austrian economist Friedrich Hayek relied on in his accounts both of the working of the human mind (Section 3) and also of the generation of order in decentralized market economies (Section 4). Having in Section 5 drawn together the threads of the foregoing analysis of Hayek’s work, and considered its implications for some key issues in Austrian methodology, I return in Section 6 to the work of Peter Berger, arguing that the notion of emergent causal powers provides a means of rebutting—in a manner that Berger might not find too uncongenial—some common critiques of his analysis of the relationship between structure and agency. Section 7 offers concluding remarks.

## 2. EMERGENCE

The concept of *emergence* refers to the possibility that, when certain elements or parts stand in particular relations to one another, the whole that is formed has properties (including causal powers) that are not possessed by its constituent elements taken in isolation.<sup>2</sup> The properties that arise when the elements are arranged in the requisite way are known as *emergent properties*, while any whole that possesses an emergent property is known as an *emergent* or “higher-level” entity. Emergent properties are structural or *relational* in the sense that their existence depends not only on the presence of their (“lower-level”) constituent parts but also on those parts being organized or arranged into a particular structure that involves them standing in specific relations to one another (Bertalanffy 1971: 54; Stephen 1992: 27; Buckley 1998: 36; Elder-Vass 2007a: 28).<sup>3</sup>

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<sup>2</sup> A causal power is a capacity to behave in a particular way, to bring about a particular type of effect and thereby to make a difference to the course of events that takes place in the social or natural world. Examples of causal powers include water’s capacity to extinguish fires and the capacity of a society where production is organized under the division of labor to produce higher levels of output than one not so characterized. For more on the notion of causal powers, see Sayer (1992: 104-16), Lawson (1997: 21-23) and Lewis (2000).

<sup>3</sup> The existence of emergent properties is often described in terms that suggest that the world is stratified in the sense that different properties exist at different “levels” or strata. For example, to use an example upon which we shall elaborate below, “liquidity” is

The classic example of emergence is provided by the case of water, many of whose properties—being liquid at room temperature, for example, or being able to extinguish fires and quench a person’s thirst—are quite different from the properties of the individual atoms of which water is composed. It is only when a collection of hydrogen and oxygen atoms is organized into the specific form of water molecules that the aforementioned properties obtain. Water, then, is an emergent entity, whilst many (though not all) of its properties (e.g. liquidity) are emergent properties.<sup>4</sup> An example of an emergent property from the social world is provided by the increased productivity that is possible when production is organized under an advanced division of labor. The capacity of a given workforce to produce a higher level of output is an emergent casual power of an advanced division of labor because it arises only when production is organized in such a way that workers stand in particular relations to one another (specializing in different stages of the production process, etc.). While it is indeed the case that one of the side effects of the division of labor is the increased dexterity of individual workers, who may as a result become more productive at the particular activity that they undertake under the division of labor, the increased capacity to produce the final product is attributable only to the group as whole, when its members are organized to form successive stages of the same production process. It is only because they are arranged so as to form a particular production process that workers under the division of labor can produce more of the final product than they could when each produced it, working in isolation from the others. The casual power to produce higher output is possessed only by the whole—the people, standing in certain relations to one another—and therefore counts as an emergent power, one that is possessed by the organized production process as a whole, not by the individual parts alone (Archer 1995: 91; Sayer 2000: 13-14).

The fact that the existence of emergent entities depends not only on the presence of particular elements but also on their standing in certain relations to one another implies that such entities cannot be entirely eliminated from causal explanations that involve the exercise of the entity’s causal powers. For sure, it may be possible to achieve an *explanatory reduction* of the emergent properties, in the sense that one can explain how the properties or causal powers of an emergent entity like water result from the properties of its parts and the interaction that takes place between them when they are arranged the specified way (i.e. one can identify and illuminate the working of the causal mechanism responsible for the existence of the emergent property).<sup>5</sup> However, this is not the same thing as an *eliminative reduction* in which the properties of the emergent entity itself can be explained away and, therefore, entirely eliminated from causal explanations involving the emergent causal powers of that entity.

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often said (non-judgementally) to be an emergent property that is possessed by certain “higher-level” entities, namely water molecules, but not by the “lower-level” atoms of which water molecules are comprised (Sayer 1992: 118-19).

<sup>4</sup> Emergent properties can be contrasted with so-called *resultant properties*, understood as the properties of wholes that *are* possessed by the individual elements of which those wholes are composed. Whereas (as we have seen) the existence of an emergent property requires that certain elements stand in specific relations to each other, thereby forming a particular structure or whole, resultant properties are possessed by the individual elements irrespective of how they are related to one another, obtaining both when those elements are taken in isolation and also when the elements take the form of an unstructured aggregation or “heap.” The paradigm of a resultant property is “mass.” The mass of a water molecule, for example, is no more and no less than the mass of its constituent atoms. (This latter example also illustrates the point, alluded to in the main text, that emergent entities typically possess resultant as well as emergent properties.)

<sup>5</sup> A “mechanism” can be defined as a way of acting or working of a structured entity. Mechanisms possess the causal power to produce certain types of outcomes in virtue of the way in which their component parts are arranged and relate to one another (that is, in virtue of their structure). For example, in virtue of their respective constitutions or structures, copper has the causal power to conduct electricity and a bicycle has the causal power to convey people to their destination at a certain speed (Lawson 1997: 21).

To see why, suppose that we have an explanatory reduction that enables us to give an account of the existence of an emergent property in terms of (i) the constituent parts of an emergent entity H, plus (ii) the relations that obtain between those parts when they are organized into the form of an H. In that case, while we can give an account of how the property arises as a result of the causal interaction between the parts when they are an H, we have done no more than explain that emergent property in terms of a *configuration*—the parts *and* their relations—that exists *only* when the emergent entity H exists, so we can eliminate neither that entity nor its emergent properties from our causal explanations. Given that the emergent property depends upon the existence of a particular set of relations between the parts of an entity like H, and given also that an emergent entity like H consists of nothing more (and nothing less) than its parts and their organization, then any causal explanation that depends upon *both* the properties of the parts and *also* upon the way in which they are typically related when they form an H is in effect an explanation in terms of that emergent entity H. If the parts in question were not organized to form an H, then the causal influence that depends upon the parts being arranged in that particular way would not obtain, simply because H's parts would not have the causal power were they not configured as an H. The causal power is a *sui generis* property of the H, not of the individual parts taken either in isolation or as an unstructured aggregate. It follows, therefore, that the emergent entity H cannot be excised or eliminated from causal accounts that depend on the exercise of its causal powers (Elder-Vass 2007a: 30-31; also see Searle 1997: 29-30, 212-132).<sup>6</sup>

For example, while we can explain the liquidity of water in terms of its atomic constituents and the relations (chemical bonds) obtaining between them when they assume the form of water molecules, the property of liquidity obtains only when the emergent entity, water, is present. The causal power to extinguish fires and to slake one's thirst is a property of water, not of the individual atoms of which it is composed. It follows, therefore, that causal explanations of how fires can be extinguished or thirst quenched have to make reference, if only implicitly, to that emergent entity, because it only when hydrogen and oxygen atoms are arranged into the form of water that the relevant causal power is present. In a similar vein, causal explanations (e.g. of differences in the wealth of nations) that refer to the increased productivity that is possible under the division of labor cannot help but refer, if only implicitly, to the social whole—the people, *plus* the structure of relations that obtains between them—that arises when work is organized along the lines so famously described by Smith in his account of the pin factory, because it is only when people's activities are arranged in that way that the capability to produce higher levels of output arises. As Elder-Vass has put it: “Although emergent properties (and thus the causal powers of entities, whether natural or social) can be explained, *they cannot be explained away*. They exist only when the relevant type of whole exists, hence they are causal powers of this type of whole and not of its parts ... [H]igher-level properties [can] be explained scientifically, but [this] does not allow them to be replaced with the properties of the parts in causal explanations because it is only when the parts are organized into this particular type of higher-level [emergent] entity that the causal power exists” (2007b: 415; emphasis added).<sup>7 8</sup>

<sup>6</sup> For similar arguments, see Lawson (1997: 57) and Hodgson (2007: 217- 22).

<sup>7</sup> A similar argument has been advanced by Hodgson, who writes that, “[E]xplanations in terms of individuals plus relations between them amounts to the introduction of social structure alongside individuals in the explanantia” (2007: 211). The view advanced here is perhaps not all that different to the one expressed by Berger in his *Invitation to Sociology*, where he writes that: “The sociologists think of ‘society’ as denoting a large complex of human relationships, or to put it in more technical language, as referring to a system of interaction ... [The term ‘society’] applies when a complex of relationships is sufficiently succinct to be analysed by itself, understood as an autonomous entity” (1966: 38).

The account of emergence outlined thus far suggests that a causal analysis of the emergent properties (including the causal powers) of an emergent entity must: (i) specify the parts or elements of which that entity is usually composed; (ii) give an account of how those elements must be structured (i.e. related to one another) in order to form the entity in question; and (iii) a causal explanation of how, when the parts are arranged in the requisite way, their behavior gives rise to the emergent causal powers of the entity in question (i.e. it is necessary to identify and illuminate the working of the generative mechanism through which the interaction of the parts, structured in the relevant way, produces the emergent power). An analysis that satisfies these three requirements can be said to provide a *synchronic* account of how at a given point in time the existence of a particular set of parts, organized so that they stand in certain relations to one another, gives rise to the existence of a particular emergent property and so constitutes an emergent whole (Elder-Vass 2007a: 31, 30).

### 3. EMERGENCE IN HAYEK'S *SENSORY ORDER*

We consider first whether the account of emergence outlined above resonates with Hayek's analysis of human cognition, as presented in his 1952 book *The Sensory Order* (Hayek 1952b). The task Hayek sets himself in that work is to explain why the phenomenal (subjective, mental) picture of the world provided by our senses differs from the physical order revealed to us by the natural sciences. The starting point for Hayek's analysis is provided by the fact that is no simple, one-to-one correspondence between the order of our sense experiences, in which events are classified according to their sensory properties or qualities (color, sound, etc.) and the physical or scientific order, in which events are classified according to their relations with other events. Objects that resemble each other in sensory terms may display very different physical relations to each others, while objects that appear to be altogether different to us may display very similar physical properties. The task of theoretical psychology, as Hayek understands it, is to explain these differences by giving an account of the processes by which a given physical situation is transformed into a certain phenomenal picture. Given that it is our central nervous system that receives external physical stimuli and transforms them into our sensory experiences, it is there—according to Hayek—that the relevant causal processes are to be found. The key explanatory task that must be undertaken, therefore, is that of showing how the neurons of which the human central nervous system is composed form a classificatory structure that is capable of discriminating between different physical stimuli so as to give rise to the sensory order that we actually experience (Hayek 1952b: 2-8, 13-19, 37-40, 47).

For Hayek, the human central nervous system consists of a hierarchical network of interconnected nerve fibers or neurons. Each neuron is connected to many—though not to all—others by means of linkages known as axons. Neurons can generate outgoing electrical impulses (or “firings”) if they are stimulated sufficiently by incoming impulses, and it is through the

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<sup>8</sup> By way of contrast, eliminative reductions *are* of course possible in the case of resultant properties. The existence of such properties does not depend on the existence of specific relations between the parts of some higher-level entity (e.g. the mass of a car is simply the mass of its constituent parts, and would be the same irrespective of how those parts are organized). Hence, the causal power of a resultant property *can* be reduced to the powers of its constituent parts, so the higher-level entity can be eliminated from any causal explanations that invoke such a property (e.g. in explaining why someone was crushed by a falling object, one can simply invoke the latter's mass without making any reference to whether the object was arranged into the form of a car or was simply a pile of scrap metal).

transmission of such impulses that connected neurons interact with each another. When an external event stimulates a sensory receptor, therefore, an electrical impulse passes along a nerve fiber running from that receptor. If the stimulus is sufficiently strong, then that neuron will generate outgoing impulses that can in turn excite other neurons, causing them to “fire” and thereby generate an ongoing sequence of neural impulses that culminates in the initial stimulus being transmitted to the brain. Significantly, as we shall see, Hayek argues that the pattern of connections between neurons is malleable. Neurons in which impulses often occur at the same time tending to become connected so that, depending on the pattern of ongoing neural activity, some new linkages are established and some existing ones atrophy and eventually wither away. For example, if particular external events regularly occur together, so that the relevant sensory receptors are stimulated at the same time, then the (sets of) nerve fibers that carry impulses from those receptors to the brain will tend to be stimulated at the same time and will as a result also become connected with one another. The formation of such linkages implies that, over time, the nervous system acquires a structure, in which the position of any one neuron is defined by its connections to other nerve fibers and where the relations in question represent (in a sense to be elaborated below) the degree to which the relevant external events have been experienced together in the past (Hayek 1952b: 42, 55-64).

The fact that neurons assume a particular structure is important for the following reason. If a person is to be able to recognize a sensation as an instance of a particular type of sensory quality, it must be distinguished from other types of sensation. But the question then arises, in virtue of what are the different sensory qualities in terms of which we experience the world differentiated from each other? Individual nerve impulses are physically identical to one another, so the existence of the different sensory qualities cannot be the result of differences in the attributes of individual impulses (Hayek 1952b: 10, 56). On the contrary, according to Hayek, the existence of the sensory order is best explained by reference to the *relationships between those impulses*, relationships that (as we are about to see) ultimately arise because the impulses in question are carried by neurons that *occupy specific positions within the structure of the nervous system*. As we are about to see, therefore, Hayek theory of the mind is relational in the sense that it is the structure of the connections between nerve fibers that governs people’s cognitive processes and which accounts for the key features of our mental experience (Hayek 1952b: 12).

To understand Hayek’s argument, note first of all that the tendency for the central nervous system to form connections between neural pathways activated by stimuli that are usually experienced concurrently implies that the (primary) nerve impulse generated by a particular external stimulus will in turn stimulate neurons connected to those along which that primary impulse is transmitted. In this way, the external stimulus leads to the generation within the central nervous system of an induced pattern of (secondary) nerve impulses, characteristic not only of the external stimulus currently being experienced but also of the other external stimuli that have typically accompanied it in the past. This train or wake of (secondary) impulses is termed by Hayek the *following* of the initial nerve impulse (Hayek 1952b: 63).

Such followings are central to Hayek’s account of the way in which the central nervous system, viewed as a network of interconnected neurons, differentiates physical events from one another and thereby gives rise to the phenomenal world of our senses. For, according to Hayek, it is by classifying external physical events according to the extended pattern of nerve firings or followings they trigger that the central nervous system distinguishes them from one another and



thereby creates distinct sensory data. Two external events are classified as the same—and so are experienced as having the same sensory qualities—if they stimulate the same configuration of neurons and so trigger an identical following. Events that excite different groups of neurons, and so generate different followings, are placed in different categories and therefore produce different sensations (Hayek 1952b: 48-54, 62-78). On this view, therefore, it is not the similarity of external events *per se* that causes them to be placed in the same class, and hence to be experienced in the same way, but rather the fact that, when they stimulate a receptor organ, they produce the same extended pattern or following of nerve impulses within the central nervous system:

By “classification” we shall mean a process in which on each occasion on which a certain recurring event happens it produces the same specific effect, and where the effects produced by any one kind of such events may be either the same or different from those which any other kind of event produces in a similar manner. All the different events which whenever they occur produce the same effect will be said to be events of the same class, and the fact that every one of them produces the same effect will be the *sole* criterion which makes them members of the same class. (Hayek 1952b: 48)

In this way, according to Hayek, the set of connections between neurons creates the classification of external stimuli that gives rise to the sensory or phenomenal order:

[T]his system of connections is acquired in the course of development of the species and the individual by a kind of “experience” or “learning;” and ... it reproduces therefore at every stage of its development certain relationships existing in the physical environment between the stimuli evoking the impulses (Hayek 1952b: 53)

Indeed, according to Hayek, the neural order—that is, the set of connections between nerve fibers in the brain, and the impulses proceeding in them—that is produced in this way *just is* the sensory order of phenomenal experience (Hayek 1952b: 40).

Herein lies the essence of Hayek’s attempt to complete the explanatory task he set himself in the *Sensory Order*, namely that of showing how it is possible that “from the known physiological elements [of the nervous system] a structure can be formed which can differentiate between different impulses passing through it in exactly the same manner in which our sensory experience differentiates between the different stimuli” (Hayek 1952b: 18; also see p. 47). For Hayek, external events stimulate the growth of an organized structure of nerve fibers that reproduces, albeit imperfectly, the patterns of events found in the external environment, in the sense that the structure of connections between the neurons corresponds topologically to the structure of the relations between some of the external stimuli that impinge upon the person in question. And by reproducing at least some of the regularities obtaining between external events, the structure of neural connections or neural order that arises within the brain provides an approximate and evolving “map” of the external, physical order (Hayek 1952b: 7, 42, 64, 68-69, 107-112).

For Hayek, then, the human mind is a vast network of interconnected neurons that acts as an instrument of classification, discriminating between incoming stimuli and thereby creating the sensory qualities we experience (Hayek 1952b: 16, 35).<sup>9</sup> “What we call ‘mind,’” Hayek (1952b: 16) writes, “is thus a particular order of a set of events taking place in some organism and in some manner related to but not identical with the physical order of events in the environment.” Significantly, as has already been hinted in some of my earlier remarks, and as Hayek’s description of the mind as an “order” underlines, Hayek conceptualizes the mind as *relational* in nature, in the sense that, while classification would not take place in the absence of nerve fibers, the capacity to discriminate between stimuli, and in that way to classify them and to generate the sensory order, is a property that is possessed, neither by the individual neurons taken in isolation, nor by an unstructured group thereof, but only by the structured entity that is formed when the nerve fibers are arranged as an ordered hierarchy (Hayek 1952b: 35, 46-47). In Hayek’s words, the whole set of sensory qualities evoked by a particular external event is “determined by the *system of connections* by which the impulses [produced by that stimulus] can be transmitted from neuron to neuron ...it is thus the position of the individual impulse or group of impulses *in the whole system of such connections* which gives them its distinctive quality” (Hayek 1952b: 53, emphasis added; also see p. 12). In Hayek’s theory, then, it is the structure of the connections between nerve fibers that governs people’s cognitive processes and accounts for the key features of our sensory experiences. As Hayek puts it, “The connections between the psychological elements are thus the primary phenomenon which creates the mental phenomena” (1952b: 53; also see pp. 46-47) (cf. Archer 1982: 475).

The significance of all this for the main topic of this paper stems from the fact that, if the power to discriminate between and classify events arises only when nerve fibers are arranged in a particular way, with particular connections or relations obtaining between them, then that capacity is an emergent property of the structured arrangement of neurons found in the human brain and central nervous system. To see why, recall that according to the relational theory of emergence outlined above, it is possible that, when certain elements or parts stand in particular relations to one another, the whole that is formed has properties that are not possessed by its constituent elements taken in isolation. And it is precisely that possibility that underpins Hayek’s theory of human cognition. For, as we have seen, on Hayek’s account the key to explaining how the phenomenal world of our senses is produced lies in viewing the “mind” as a *relational* order in which it is not the existence of nerve fibers *per se*, but rather the fact that they are arranged in a particular way, with particular connections or relations obtaining between them, that produces the

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<sup>9</sup> The use of the term “creating” is significant because one important implication of Hayek’s analysis is that, far from it being the case that our experiences are built up out of elementary sensory elements that “mirror” or “picture” the corresponding parts of the external world, even our most basic/concrete sense impressions are a product of the creative activity of our minds. “Perception,” Hayek (1952b: 142) contends, “is always interpretation, the placing of something into one of several classes of objects” (also see Hayek 1952a: 42, 53, 77-78, 108, 142-44; also see Hayek [1969] 1978: 41-44). (Berger and Luckmann express a similar view when they write that, “The reality of everyday life appears already objectified, that is, constituted by an order of objects that have been designated *as* objects before my appearance on the scene” [1966: 35]). Moreover, while Hayek maintains that there are sufficient commonalities between the structures of different people’s minds to ensure that they categorise and so experience the world in a similar fashion, they will not be exactly the same. To see why, recall that rather than being fixed, the structure of a person’s central nervous system evolves over time, with connections among neurons gradually forming in response to stimuli. Given that different people encounter different environments, and therefore receive different stimuli, it follows that their minds will evolve differently over the course of their lives. Consequently, while the classificatory apparatus possessed by any two individuals will share many common features, so that those individuals’ will experience the world in similar ways, their experiences and knowledge will not be identical (Hayek 1952b: 110). Thus, Hayek’s claim—central to his economics—that the sum total of knowledge in society is both subjectively perceived and also dispersed among the population reflects his beliefs about human nature and, more specifically, about the human mind.

phenomenal world of our senses. Were it not the case that people's nerve fibers were arranged in such a way that some stimuli gave rise to different "followings," then no discrimination between stimuli, no classification and, therefore, no perception (nor any other mental property, for that matter) would be possible. In short, then, Hayek's analysis suggests that the capacity to classify stimuli arises only when the individual nerve fibers are arranged so as to form a structured, hierarchical whole. That capacity is, therefore, an emergent property. Its bearer is the higher-level or emergent entity, namely the human mind, that is formed when a set of nerve fibers is arranged into the type of structure that is required to facilitate the classification of external stimuli.

The account of the *Sensory Order* presented above suggests that Hayek's account of human cognition can be thought of as resting, if only implicitly, on the belief that people's powers to classify and to perceive events are an emergent property of the way in which nerve fibers are organized into the characteristic structures of the human mind. We can underline this point by considering briefly how Hayek's account of the mind satisfies the requirements for a synchronic account of emergence set out above. Recall that such an account requires the following: (i) a specification of the parts or elements of which the emergent entity in question is composed; (ii) an account of how those elements must be structured or related to one another in order to form that entity; and (iii) a causal explanation of how, when the parts are arranged in the requisite way, their behavior gives rise to the relevant emergent causal power of that entity (i.e. it is necessary to identify and illuminate the working of the generative mechanism through which the interaction of the parts, suitably structured, produces the emergent power under investigation). Hayek's account of the workings of the central nervous system amounts to just such a synchronic analysis of an emergent power—in this case the power to classify external stimuli and thereby transform them into the phenomenal world of sense perception—as can be seen if we map Hayek's theory onto the three requirements for a synchronic causal analysis of an emergent property just mentioned: (i') the parts or elements of the system are the individual nerve fibers; (ii') those components have to be arranged so as to form an ordered hierarchy whose structure reproduces the relations that characterise the external, physical order; and (iii') it is by showing how both how external stimuli lead to the growth of such an arrangement of neurons, and also how causal interactions between the nerve fibers—whereby electrical impulses passing along one fiber cause the neurons in its following to fire—generates a pattern of neural activity that reproduces or "models" the particular environment in which a person finds him or herself at a given moment in time, that Hayek gives a causal explanation of how a suitably structured arrangement of neurons is able to discriminate between and classify external stimuli in a manner that parallels the classification in perceptual experience (Hayek 1952b: 112-18). In this way, Hayek gives an account of the causal mechanism through which the interaction between individual nerve fibers, suitably structured, generates the emergent power to classify events and produce the phenomenal world of sense experience.

Hayek's account of the sensory order can thus be seen to satisfy all three requirements for a synchronic causal analysis of an emergent property, in this case the emergent causal power of the human brain to transform physical stimuli into the phenomenal world of sense perception. The power in question is *emergent* because it is possessed only by a particular whole—namely the hierarchically ordered arrangement of neurons found in the human brain—and not by those neurons taken either in isolation or as an unstructured aggregate or group. And that emergent whole—the neurons *plus* the relations that obtain between them—cannot be eliminated from

causal explanations of the generation of the sensory order because, if the nerve fibers were not related in such a way that at least some stimuli give rise to different followings, then it would be impossible to discriminate between and classify different stimuli in the way required to produce distinctive sensory qualities. On this account, the unique causal powers of human mind—including its capacity to imbue events with meaning and to initiate courses of actions in a purposeful fashion, as well as its ability to generate the phenomenal world of sense experience—all follow from the fact that the neurons of which it is composed would not behave in the ways characteristic of the human mind if they were not constituted into such a mind by a particular type of physiological/neural relationships. And just as explanatory reduction does not entail eliminative reduction in the case of physical emergent properties like liquidity and social emergent properties such as the division of labor, so too does it not entail eliminative reduction in the case of human (mental) properties. It follows, therefore, that the human mind, and associated mental properties such as purposes, beliefs, and so on, cannot be eliminated from our explanations of human behavior (cf. Elder-Vass 2007b: 415; Searle 1997: 22, 29-32, 144, 212-13).<sup>10</sup>

#### 4. HAYEK'S ACCOUNT OF SPONTANEOUS SOCIAL ORDER IN DECENTRALIZED MARKET ECONOMIES

We move on to consider whether the concept of emergence is invoked in Hayek's analysis of the question of how order is possible in decentralized market economies. In this seminal 1937 paper on "Economics and Knowledge," Hayek argues that that question turns on the issue of how people acquire the knowledge required to form mutually compatible plans, when that knowledge is dispersed throughout the economy as a whole rather than being concentrated in the mind of one individual (Hayek [1937] 1948: 33, 46).<sup>11</sup> Hayek first made significant headway in his efforts to answer this question in his seminal paper on "The Use of Knowledge in Society" (Hayek [1945] 1948). In that paper, Hayek highlights the coordinating role of freely adjusting market prices. When individuals act on the basis of their own knowledge, Hayek contends, they generate changes in relative prices which indicate the consequences of their actions for the scarcity of various goods and thus convey to others hints about the (local, at times tacit and always dispersed) knowledge which inform those actions, thereby enabling people successfully to coordinate their actions with one another. In this way, people are induced to adapt their behavior

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<sup>10</sup> Of course, Hayek advances his own computational argument against attempts to eliminate references to mental entities from our accounts of human behavior. More specifically, he argues in the *Sensory Order* in favour of a mild and "practical" form of methodological dualism, according to which, in attempting to explain human conduct, social scientists must have recourse to terms that refer to mental phenomena like beliefs, purposes, intentions and the like. The reason is as follows. Explanation is, for Hayek, a form of classification. However, as Hayek sees things, "Any apparatus of classification must possess a structure of a higher degree of complexity that is possessed by the objects which it classifies" (1952b: 185). For instance, the human brain will be able to explain fully only those phenomena that possess a lower degree of complexity than itself. It follows that the brain will be incapable of comprehending fully itself, in the sense of providing a complete physical classification of its own structure and operation. Consequently, "in discussing mental processes we will never be able to dispense with mental terms, and we shall have permanently to be content with a practical dualism" (1952b: 191). In this way, the account of the mind provided in the *Sensory Order* can be thought of as providing a (scientific) justification for Hayek's preferred, subjectivist approach to economic methodology, according to which the social sciences we will never be able to dispense with references to people's beliefs, purposes, and intentions (Caldwell 1994). The ontological/emergentist argument against the elimination of such terms from explanations of human behavior complements Hayek's own epistemic argument.

<sup>11</sup> "I encounter knowledge in everyday life as socially distributed, that is, as possessed differently by different individuals and types of individuals" (Berger and Luckmann 1966: 60; also see p. 94-95).

to changes in their circumstances without most of them ‘knowing anything at all about the original cause of these changes’:

The most significant thing about this system is the economy of knowledge with which it operates, or how individual participants need to know in order to be able to take the right action. In abbreviated form, by a kind of symbol, only the most essential information is passed on and passed on only to those concerned. It is more than a metaphor to describe the price system as a kind of machine for registering change, or a system of telecommunication which enables individual producers to watch merely the movement of a few pointers ... in order to adjust their activities to changes of which they may never know more than is reflected in the price movement. (Hayek [1945] 1948: 86-87)

On this view, prices act as “knowledge-surrogates,” summarizing in a publicly available form the subjective judgments about the value of resources which individuals form on the basis of their local and often tacit knowledge of their circumstances, thereby enabling other people to adjust their behavior to (constantly changing) circumstances about which they have little or no direct awareness (Hayek ([1945] 1948: 83-90).

However, as Hayek hints in his 1945 paper (see [1945] 1948: 88), and as he argues more systematically and explicitly in his later work on the rule of law, the information provided by market prices will enable people to form reasonably accurate expectations of one another’s plans only if it arises against “a fairly constant framework of known facts” (Hayek 1976: 125), that is against the relatively stable background provided by the institutions, most notably the legal system, of a liberal polity (Fleetwood 1995; Vaughn 1999; Lewis forthcoming).<sup>12</sup> As Hayek came to realize, the dissemination of knowledge required for plan coordination is facilitated not only by price signals but also by a network of shared, formal and informal social rules (such as the laws of property, tort and contract, and norms of honesty and promise-keeping respectively). It is the fact that people act in accordance with the same general guidelines about how to interpret and act in various kinds of situation that makes it possible for them to form reasonably accurate expectations of each other’s future conduct, thereby enabling them to formulate plans that have a reasonable chance of coming to fruition:

What makes men members of the same civilization and enables them to live and work together in peace is that in the pursuit of their individual ends the particular monetary impulses which impel their efforts towards concrete results are guided

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<sup>12</sup> Hayek described the development of his understanding of how order is generated in decentralized market economies as follows: “[T]hrough at one time a very pure and narrow economic theorist, I was led from technical economics into all kinds of questions usually regarded as philosophical. When I look back, it seems all to have begun, nearly thirty years ago, with an essay on ‘Economics and Knowledge’ in which I examined what seemed to me some of the central difficulties of pure economic theory. Its main conclusion was that the task of economic theory was to explain how an overall order of economic activity was achieved which utilized a large amount of knowledge which was not concentrated in any one mind but existed only as the separate knowledge of thousands or millions of different individuals. But it was still a long way from this to an adequate insight into the relations between the abstract rules which the individual follows in his actions, and the abstract overall order which is formed as a result of his responding, within the limits imposed upon him by those abstract rules, to the concrete particular circumstances which he encounters. It was only through a re-examination of the age-old concept of freedom under the law, the basic conception of traditional liberalism, and of the problems of the philosophy of the law which this raises, that I have reached what now seems to me a tolerably clear picture of the nature of the spontaneous order of which liberal economists have so long been talking” (Hayek [1964] 1967: 91-92; also see 1960: 3).

and restrained by the same abstract rules. If emotion or impulse tells them what they want, the conventional rules tell them how they will be able and be allowed to achieve it. (Hayek 1976: 12)

Perhaps most notably, by making it possible for business people to enter into and enforce contracts, the rules of property, contract and tort law enable entrepreneurs to develop and embark upon their plans in the confident expectation that the contributions from their fellow men required to implement those plans will actually be forthcoming. It is for this reason that Hayek contends that abstract legal rules “could almost be described as a kind of instrument of production, helping people to predict the behavior of those with whom they must collaborate” (Hayek [1944] 2007: 113).

Of course, as Hayek made clear, while such contracts enable entrepreneurs to secure a measure of control over both the resources they need to implement their plans and also over at least some of the sales required to make their activities profitable, thereby giving them the assurance about the future for them to embark on those projects with a reasonable hope of success, they such contracts do not tie the future down completely. That is so both because there always remains the possibility that one of the parties will unexpectedly renege on their contractual commitments, and also because such contracts typically guarantee neither the price nor the quantity of sales that entrepreneurs will be able to secure over the entire length of their proposed projects:

The rules serve to provide information for the decision[s] of individuals, and thus help to reduce uncertainty, but they cannot determine what use the individual can make of this information and therefore also not eliminate *all* uncertainty. They tell each individual only what are the particular things he can count on being able to use, but not what the results of his use will be so far as these depend on the exchange of the product of their efforts with others. (1976: 123)

Notwithstanding such caveats, Hayek concludes that the rules of just conduct *do* “limit the range of permitted actions in such a manner that the intentions of different persons will not clash ... [thus] open[ing] for all the possibility of effective collaboration with others ... that makes it possible for all parties to achieve what they are striving for” (1976: 124). Hence, according to Hayek, such rules enable people to predict each other’s actions well enough to facilitate the formation of mutually compatible plans most of the time (Hayek 1960: 148-61; 1976: 37-38, 123-25).

The outcome generated when the competitive interaction that takes place free markets is guided by such rules is orderly in the following sense:

By “order” we shall ... describe *a state of affairs in which a multiplicity of elements of various kinds are so related to each other that we may learn from our acquaintance with some spatial or temporal part of the whole to form correct expectations concerning the rest, or at least expectations which have a good chance of proving correct.* (Hayek [1976] 1982: 36)

The orderliness of free-market activity consists, then, in the fact that people can usually predict their behavior of their fellows well enough to devise plans that have a decent chance of being brought to fruition.

While thus far we have emphasized the way in which at any given point in time purposeful human agency is facilitated by an *inherited* stock of social rules, it also important also to note that the *continued* existence of those rules depends upon *current* human action (Hayek [1942-44] 1979: 152; [1967] 1967: 72-80). In drawing upon the stock of inherited rules, traditions and customs in order to act, people reproduce (or, if individuals break away from traditional rules and engage in new forms of conduct which others subsequently imitate, transform) those structures, thereby ensuring their continued existence into the future (perhaps in a modified form). Hayek can thus be seen to subscribe to a *transformational conception of socio-economic order*, according to which the social rules that facilitate the formation of mutually compatible expectations, and which therefore underpin the possibility of socio-economic order, are the ever-present condition for, and also the continually (and often unintentionally) (re)produced outcome of, people's actions (Hayek [1942-44] 1979: 145-46; 1982: 157-61). On this view, social order *just is* the (never-ending) process whereby people draw on (pre-existing, historically given) social structures (such as the legal system) in order to act and, in doing so, subsequently either reproduce or transform those structures (Fleetwood 1995: 135-55).<sup>13</sup>

Significantly, if we think of the capacity of the market economy to coordinate the decision-making of a multitude of individuals, each of whom is pursuing his or her self-interest in the light of his or her own local knowledge, then it is quite legitimate to view the coordinating powers of the market as an emergent property of the market system. To see why, recall that a synchronic account of emergence requires that the following: (i) a specification of the parts or elements of which the emergent entity in question is composed; (ii) an account of how those elements must be structured or related to one another in order to form that entity; and (iii) a causal explanation of how, when the parts are arranged in the requisite way, their behavior gives rise to the relevant emergent causal power of that entity (i.e. it is necessary to identify and illuminate the working of the generative mechanism through which the interaction of the parts, suitably structured, produces the emergent power under investigation). Hayek's account of the workings of the market system amounts to just such a synchronic analysis of an emergent power—in this case the power to facilitate orderly economic activity in a decentralized market economy characterised by dispersed, tacit knowledge—as can be seen if we map Hayek's theory onto the three requirements for a synchronic causal analysis of an emergent property just listed.

The first requirement is that we specify the parts or elements of which the emergent entity that is the market system is composed. This is straightforward enough in the case of Hayek; the parts or elements of the market system are simply the people who populate it. As we have seen in Section 3 above, though, Hayek offers an elaborate account of the nature of these individuals, that can be thought of both as providing an ontological grounding for his belief in the existence of subjective (local) and tacit knowledge, and also (and perhaps more controversially)

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<sup>13</sup> “[S]ocial order is ... an ongoing human production ... both in its genesis (social order is the result of past human activity) and its existence in any instant of time (social order exists only and in so far as human activity continues to produce it) it is a human product” (Berger and Luckmann 1966: 69-70).

as emergent entities in their own right, possessing various properties that are not possessed by the physical and chemical parts of which they are composed.

A synchronic causal analysis of an emergent entity like a free-market system requires, second, is an account of how its elements must be structured or related to one another in order to form that emergent entity. Hayek satisfies this requirement in his account of how the possibility of order in decentralized market economies demands that the competitive interaction that take place between people on free markets should be structured and governed by the institutions of the liberal polity, most notably the legal system. For it is the abstract rules of contract, property, and tort law that specify how the people must relate to one another in order to form a working market system. Those rules define various positions (e.g. buyers and sellers, employers and employees, creditors and debtors, etc.) and set out both the rights that people occupying those positions enjoy and also the obligations they bear. In doing so, they specify in broad terms how the people who occupy those positions must relate to one another (e.g. legally binding employment contracts specify the rights and responsibilities of employers and employees, detailing for example both what an employer must pay his/her employee and also what the employer can expect from the employee in return). In this way, then, the abstract rules of the legal system define the relations between those positions and, therefore, between the people who occupy them, specifying in broad terms how people occupying certain positions should relate to one another in order to form a liberal market economy. And it is people's knowledge of the legal system and of the rights and obligations that take upon themselves when they enter into legally binding contracts, that enables them to form sufficiently accurate expectations of each other's future conduct to facilitate the formation of mutually compatible plans (Hayek 1973: 106-09, 172 n. 25; also see Runde 1993: 388-89).

Third, and finally, a synchronic causal analysis of an emergent causal power requires an account of the working of the generative mechanism through which the interaction of the parts of the emergent entity, suitably structured, produces the emergent power in question. This is precisely what Hayek's analysis of how social order is possible in decentralized market economies provides. For what Hayek offers is an explanation of how, when the competitive interaction that takes place on free markets is governed and structured by a suitable set of abstract legal rules, a set of relative prices is (unintentionally) generated that enables people to adjust their plans to one another well enough for them to have a reasonable chance of coming to fruition (i.e. for an orderly social outcome to obtain). As Hayek (1973: 38) put it, we can understand the market only if we are able "mentally to reconstruct it by tracing the relations that exist between the elements" (also see Hayek [1942-44] 1955: 56). On this view, therefore, it is necessary to consider in their own right the nature and properties of the institutions that structure the interactions between people and that, in the case of the free market—but not a centrally planned economy—ensure that the relations obtaining between people are such that they can form reasonably accurate expectations of one another's plans.<sup>14</sup>

Hayek's account of social order can thus be seen to satisfy all three requirements for a synchronic causal analysis of an emergent property, in this case the emergent causal power of the institutions of a free-market economy to coordinate people's activities in the face of decentralized

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<sup>14</sup> For more on the notion of institutions, and the relationship between institutions and rules, that underpins the position set out here, see Lawson (1997: 318, 2005: 15), Hodgson (2006: 18) and Fleetwood (2008). Also see Berger (1966: 104-06) and Berger and Luckmann (1966: 83, 89-96).



decision-making and dispersed, and often tacit, knowledge. The power in question is *emergent* because it is possessed only by a particular whole—namely the free-market system that is constituted by a group of people whose interactions are structured by the abstract rules of contract, tort and property law—and not by those individuals taken either in isolation or as a group whose interactions are governed and structured by some other set of rules. And that emergent—the people *plus* the relations engendered by the rule of law—cannot be eliminated from causal explanations of the coordinative properties of free markets because, if people were not so related, then their interactions would not be structured in the way required to produce an orderly outcome.

## 5. SUMMARY AND IMPLICATIONS

The account of Hayek's work presented above suggests that, certainly by the time of his later work, he conceptualizes the relationship between social structure and human agency in terms of a *transformational model of social action*, whereby social structure is both a (typically unacknowledged) condition of people's actions, as well as an (often unintentionally) (re)produced outcome of those actions. In this way, Hayek avoids the reductionist extremes of voluntarism/individualism, whereby social structure are ontologically reducible to and determined by creative human agency, and holism/determinism, whereby people's actions are entirely determined by, and are therefore ontologically reducible to, over-arching social wholes. Social structure and human agency are recursively related, with the existence of certain (relationally defined) social wholes structuring and shaping people's actions, and thereby making it possible for people to achieve certain outcomes that would be impossible in the absence of those structures, and with people's lower-level interactions underpinning the continued existence (or, on occasion, the transformation) of the higher-level emergent structures. According to this approach, then, the relationship between structure and agency is one of non-reductionist co-development: Both social structure and human agency possess their own *sui generis*, emergent causal powers, so although each depends on the other neither has ontological or analytical priority.

Before moving on to consider how this approach compares to that adopted by Peter Berger and his associates, I want to explain how it bears upon an issue raised by Robert Nozick in his 1977 paper, "On Austrian methodology," namely the consistency of the Austrian position on reductionism. Nozick argued that Austrians are guilty of inconsistency when they object to macroeconomics on the grounds that it fails to show how macroeconomic aggregates are grounded in human action, because the type of reductionist argument on which their claims rest can in turn be applied to their own preference for grounding explanations in the purposeful human action. Austrians are inconsistent, Nozick maintains, because the logic of their own reductionist position demands that, far from being content with explanations that are grounded in human action, they ought instead to seek to reduce the latter still further, to the biochemical and ultimately the neurological processes that underpin it (Nozick 1977: 353-61).

The Austrian response, attributed to Ludwig Lachmann, centres on the importance of meaning for understanding human action (Lavoie 1978: 8; Boettke 2006). Austrians, as is well known, are subjectivists in the sense that they believe that the basic subject-matter of economics

can be defined only by reference to meaningful human conduct (Mises [1949] 1966: 92; Hayek 1952a: 43-58; Lachmann 1970: 9, 1986: 49).<sup>15</sup> This is significant for the issue of reductionism, Lachmann maintains, because if economics is centrally concerned with how people interpret the world around them, and if it is only at the level of the individual person that we can attribute meaning to human action, then economics must be concerned above all else with the issue of how people understand their circumstances and how their interpretations lead them to act. There is no need, therefore, to try to take the explanatory process any further, by attempting to reduce meaningful human conduct to underlying neurological processes, for the simple reason that the individual meanings and purposes from which economic analysis must begin simply do not exist at the microphysical level of reality.

The phrasing of the last sentence hints at the flaw in this attempted rebuttal of Nozick's argument. For the claim that it is because only people possess the ability to imbue events and states of affairs with meaning that Austrians are justified in stopping the process of explanatory reductionism at the level of the individual begs the question of *why* it is that people—rather than cells or individual nerve fibers—have that ability. The basis of an answer to that question can be found in *The Sensory Order*, which—as we shall see—suggests that the capacity to parse the world into meaningful objects is an emergent property of the ordered arrangement of nerve fibers that is the human mind, not of those fibers taken in isolation. But if Austrians' reluctance to reduce individual purposes and meanings to underlying microphysical processes rests on the existence of emergent properties, then as Nozick suggests, the same type of emergentist/anti-reductionist argument can also be used to undermine their claims that social structures—though not necessarily every macroeconomic aggregate—ought to be reduced to individual human action.

Hayek's approach implies that the ability to interpret and assign meaning to events, states of affairs, and objects is an emergent property of the entire network of nerve fibers that constitutes the human mind. For, as we have seen, it is only by generating particular followings within the central nervous system that external stimuli come to signify something distinctive for a person and thereby acquire a particular meaning. Hayek's theory of the mind implies, therefore, that the attribution of meaning is an emergent product of a process of classification that requires the presence of a particular whole, namely the hierarchically ordered arrangement of neurons found in the human brain. The power to interpret stimuli and to imbue them with meaning is not possessed by those neurons taken either in isolation or as an unstructured aggregate or "heap" (Hayek 1952b: 46). We can elaborate on this point by recalling that for Hayek the mind is a relational order in which sensory qualities are distinguished from another only in virtue of the effects they have in evoking *other* qualities:

[N]othing can become a problem about sensory qualities which cannot in principle also be described in words; and such a description in words will always have to be a description in terms of the relation of the quality in question to other sensory qualities ... In other words, all that can be communicated are the differences between sensory qualities. (Hayek 1952b: 31)

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<sup>15</sup> Similar views are to be found in Berger (1966: 100), who writes that "a social situation *is* what is it defined to be by its participants."

The question of the absolute character of a sensory quality (such as how “red” red really looks) is meaningless, because all that can be communicated are the differences between the sensory qualities. As Hayek puts it, the whole order of sensory qualities can be exhaustively described in terms of (or “consists of nothing but”) all *relationships* existing between them (Hayek 1952b: 18; also see pp. 30-36). What we have here is something akin to a Saussurian theory of meaning, according to which an individual’s ability to interpret events, objects, etc., as being ones of a particular kind rests on their being classified in terms of the relations of similarity and dissimilarity between their sensory qualities and those of other events, objects, etc. (Butos and McQuade 2002: 115; Feser 2006: 292, 295-96; cf. Anderson *et al.* 1986: 103-05).<sup>16</sup>

Hayek’s theory of the mind implies, then, that the capacity to interpret stimuli and to attribute meaning to them is an emergent product of the organized arrangement of nerve fibers found in the human brain. But once the possibility of emergent properties is acknowledged at one level, in this case of at the level of the human mind, then—as Nozick suggests—the door is open to the possibility of emergent properties at other levels, including that of (emergent) social wholes (if not necessarily every macroeconomic aggregate).<sup>17</sup> On this view, consistency<sup>18</sup> demands that Austrians acknowledge that just as people have causal powers—human agency, including the ability to interpret and assign meaning to events—in virtue of the emergent properties that arise from the way their constituent parts are organized, so too—as we have argued above—do social structures (understood as relations between positions) possess their own, *sui generis* causal powers, something that many Austrians appear to regard as incompatible with their ostensible commitment to methodological individualism.<sup>19</sup> Hence, as Nozick speculates, “the *anti-reductionist* arguments which Austrian methodological individualists wish to use against the possibility of reduction from below (physics and neurophysiology) also can be wielded against methodological individualism itself” (1977: 354). However, as we have seen that Hayek himself ultimately (if only implicitly) acknowledges, a satisfactory analysis of how the market generates order requires an account not only of the actions and causal powers of individual people, as many advocates of methodological individualism would suggest, but must also a social-structural or macro-level focus on the set of social relations that, by structuring and governing people’s interactions, co-determines (via its own, *sui generis* causal powers) the ultimate outcomes that are produced (cf. Caldwell 2004: 284-87). In practice, then, if not in their explicit methodological pronouncements, Austrians such as Hayek acknowledge the existence of social-structural or macro-level emergent causal powers, as well as the causal efficacy of meaningful human action (Lewis 2005a, forthcoming).

## 6. BERGER AND LUCKMANN ON STRUCTURE AND AGENCY: OUTLINE, CRITIQUE AND RESPONSE

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<sup>16</sup> For more on the links between emergence and meaning, see Fairclough *et al.* (2003).

<sup>17</sup> For accounts of what a macroeconomics that takes the notion of emergence seriously might look like, see Dunn (2004) and Smithin (2004).

<sup>18</sup> Consistency in this case centres on considering whether the type of ontological argument that underpins the ascription of emergent causal powers to one stratum of reality—here, to people—can also be applied to some other stratum, namely to social structures. The argument advanced in this paper suggests, of course, that the same type of ontological argument that sustains the ascription of emergent causal powers to people also supports their being predicated of (relationally defined) social wholes.

<sup>19</sup> For examples of Austrians’ reluctance to acknowledge such *sui generis*, social-structural causal powers, see Lewis (2005a: 300-03) and Lewis and Runde (2007: 177-78).

I want to argue to argue that the account of emergence outlined above can, in many ways, complement Berger and Luckmann's work, by helping them to rebut some of the criticisms that have commonly been made against them. Moreover, while this assistance may require a revision in Berger and Luckmann's metaphysics—that is, in their account of what the nature of the social world—that revision need not be as costly as they might at first fear. In order to understand all this, it is necessary first to outline Berger and Luckmann's analysis of the relationship between social structure and human agency.

Berger and Luckmann's account is based on three key ideas or moments. First, in a process Berger and Luckmann label "externalization," social structures or institutions arise from the reciprocal expectations that people gradually develop as they interact with one another. As people observe each other's actions, they begin to develop enduring assumptions about what others will usually do in a variety of situations. Berger and Luckmann christen these intersubjectively shared understandings "typifications." These typifications become more and more anonymous the further removed they are from face-to-face interaction and, taken together, they constitute a key part of social structure. In this way, according to Berger and Luckmann, people create social institutions—defined as 'distinctive complex[es] of social actions' (Berger 1966: 104)—as their typified social actions congeal into a fixed form (Berger and Luckmann 1966: 33-37, 43-48, 75-77).

To describe shared understandings as "externalized" implies that they have acquired a certain distance or distinctiveness from the people who produced them. This brings us to the second concept or moment in Berger and Luckmann's analysis, namely "objectivation." The latter denotes the way in which, over time, typical forms of behavior and institutions come to be viewed as Durkheimian social "facts" that exist independently of people's actions. There are a number of aspects to this process. The first reflects the impact of language, which—by making it possible to refer to shared understandings and institutions in a way that is detached from the face-to-face interactions through which they develop—encourages people to treat them as objects, that is as self-evident, taken-for-granted, "natural" features of the world that exist independently of individual action. In this way, typical forms of human action come to be viewed as constituting an "objective," autonomous social reality over which individuals have little or no control—as "the ways things are," irrespective of how people want them to be (Berger and Luckmann 1966: 77-78). In domestic life, for example, people often describe their routine interactions with one another in terms of the idea of a "family." But when people give a name to something in that way, they make it appear as something separate from and external to them. In this case, "the family" comes to be seen as a thing, an object is separate from and independent of its individual members. The objectivation of human action that occurs through people's use of language and other symbolic forms is reinforced by the fact that typical forms of conduct tend to be enshrined in traditions and rituals, so that they become established as external realities that confront new generations of people as objective facts. The sedimentation of typifications in the form of traditions endows them with even more of an objective quality in people's eyes. The upshot, according to Berger and Luckmann, is that institutions and typifications become so natural to people, so taken-for-granted, that they appear to them as a normal, inevitable and objective feature of experience. Although this world is the result of human action, people come to experience it as something other than a human product. Through objectification, then, institutions

come to be seen as natural and inevitable features of the social world that individuals have little or no power to circumvent or change (Berger and Luckmann 1966: 49-61, 70-87; Berger 1966: 107-09).

The third moment of Berger and Luckmann's analysis concerns the way in which the social products that arise as a result of the process of objectivation are (re)incorporated into the individual's consciousness—in the form of subjectively plausible definitions of reality, morally sanctioned codes of conduct, recipes for daily life, and the like—thereby structuring people's minds and becoming subjectively real, and meaningful, for them (1966: 149-66). Berger and Luckmann suggest that such “internalization” occurs through a process of ‘socialization’, a life-long process that begins at the very outset of a person's life when as a child (s)he is taught the rules and regulations that must be observed by the member of a particular society. When children are born into a family, say, they learn the habits and practices that have been adopted by their parents and come to accept them as part of the natural order of things. This ‘primary socialization’, as Berger and Luckmann term it, is followed by “secondary” socialization, which takes place later in life as people are inducted into various sub-groups and learn how to do a particular type of job, for example. The upshot of such socialization is that people lose sight of the fact that typical forms of action and institutions are social products and view them instead as unavoidable, and unchangeable, constraints on their behavior that specify how they *must* conduct themselves in particular situations. In this way, Berger and Luckmann contend, people's behavior is guided and regulated so that it conforms to “predefined patterns of conduct, which channel it in one direction as against the many other directions that would theoretically be possible” (Berger and Luckmann 1966: 72; also see pp. 53, 55).

The three processes just outlined are closely tied together, in such a way that they closely reinforce each other. Individuals create society while at the same time society creates individuals in an unending chain of reciprocal influences: “Society is a human product. Society is an objective reality. Man is a social product” (Berger and Luckmann 1966: 79). On this view, the relationship between people and the social world is a dialectical one in which peoples interact with one another to produce society and in which that social product continuously reacts back on its producers, shaping their consciousness and actions:

It is through externalization that society is a human product. It is through objectivation that society becomes a reality *sui generis*. It is through internalization that man is a product of society. (Berger 1967: 4)

Ultimately, though, the “objectivity” of institutions is simply an illusion, a consequence of the way in which, thanks to the process of objectification, people have “forgotten” that such institutions are human products. In actual fact though, according to Berger and Luckmann, institutions are ontologically reducible to human action: “The institutional world is objectivated human activity, and ... despite the objectivity that marks the social world in human experience, it does not thereby acquire an ontological status apart from the human activity that produced it” (Berger and Luckmann 1966: 78)

Social structure is the *sum total* of these typifications and of the recurrent *patterns* of interaction established by means of them. (Berger and Luckmann 1966: 48; emphasis added)

If social structure is viewed as consisting of nothing more than the aggregation (“sum total”) of people’s typifications, and if it is held to consist of nothing other than patterns of human action, then the possibility that social structure is ontologically distinct from and irreducible to human conduct, possessing its own emergent causal powers, appears to be ruled out of court.

What are we to make of this account? There exist a number of contributions in the literature which suggests that Berger and Luckmann fall short of providing a satisfactory account of the structure-agency relationship. The problem, the critics argue, is that for all their efforts to avoid the extremes of voluntarism and determinism, Berger and Luckmann end up reproducing both errors in their own theory. Bhaskar’s oft-quoted verdict is representative of the views of these critics. Berger’s dialectical model is “seriously misleading,” Bhaskar maintains:

For it encourages, on the one hand, a voluntaristic idealism with respect to our understanding of social structure and, on the other, a mechanistic determinism with respect to our understanding of people ... People and society are not ... related “dialectically.” They do not constitute two moments of the same process. Rather they refer to radically different kinds of thing. (Bhaskar 1989: 33)

On the one hand, by suggesting in their account of the first moment of the dialectic relationship between structure and agency that society is simply an externalization created essentially through language, thereby denying its ontological irreducibility to human agency, Berger and Luckmann are said to repeat the Weberian mistake of viewing society as a voluntaristic creation of individuals. For if social institutions consist of nothing more than people’s current actions, then—according to the critics—there literally is nothing to structure and shape the current interactions through which shared meanings develop, so that the construction of social structure is reduced to a series of negotiations that take place in a social vacuum.<sup>20</sup> On the other hand, by the time Berger and Luckmann reach the third moment of the dialectical relationship and discuss how individuals “internalize” objectified social products, they are accused of suggesting that individual consciousness is simply the subjective reflections of such “objectifications” and thus of endorsing a rather mechanical (deterministic) view of the person according to which “individual consciousness is socially determined” (Berger and Luckmann 1966: 96) (Bhaskar 1979: 32-37; Ainlay 1980: 51; Outhwaite 1982: 153; Layder 1994: 87-89; Sibeon 60-64).

At the heart of these problems, the critics contend, lies Berger and Luckmann’s failure to acknowledge explicitly the existence of emergent properties and the ontological distinction between structure and agency. Consider first the charge that they end up reproducing, in the various moments of their dialectical analysis, the very errors of voluntarism and determinism they seek to avoid. The root problem here arises, it is argued, because the belief that structure and agency are one and same thing means that the only way Berger and Luckmann can separate them is by considering them as different moments of a dialectical process. What has happened, in

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<sup>20</sup> For, as Fleetwood (2008: 242, 244) rightly notes, to view social structures as *patterns* in people’s actions is to conflate action with the conditions that make action possible.

effect, is that, far from being completely banished from the theoretical scene, the ontological distinction that Berger and Luckmann are so reluctant to make has merely been transposed from their ontology to their methodology, reappearing in the distinction between the different moments of the structure-agency dialectic. As we have seen, the first moment of that dialect focuses on the role of agency, failing—so the critics contend—to do justice to the coercive power of social structure, while the second moment effectively brackets agency and (over-)emphasizes the extent to which consciousness is shaped by objectified institutions. By artificially allocating structure and agency to separate stages in a dialectical process, rather than treating them as ontologically distinct features of social reality that interact continuously with one another through the interplay of their own emergent causal powers, Berger and Luckmann’s *official* approach does not afford them the conceptual tools required adequately to theorise the relationship between structure and agency (Archer 1995: 63, 93-134; Sibeon 2004: 61-64).<sup>21</sup>

What is one to make of such criticisms? Consider first of all the charge of voluntarism. The obvious response here is to point out that Berger and his colleagues spend a good deal of time discussing how people’s interactions are shaped by inherited social structures. For Berger and his co-authors, inherited and intersubjectively shared typifications provide people with the knowledge—the “recipes,” as Berger is wont to call them—required to carry on successfully in everyday life:

The social stock of knowledge ... supplies me with the typificatory schemes required for the major routines of everyday life ... [and m]y interaction with others in everyday life is ... constantly affected by our common participation in the available stock of knowledge. (Berger and Luckmann 1966: 58, 56; also see pp. 83, 120-22, 150, 191, and Berger 1966: 101-04)

And by thus acknowledging that inherited typificatory structures shape how people act, Berger and Luckmann surely do also acknowledge that current social life is not merely a voluntaristic creation of current human action but rather the product of the (causal) interplay between inherited social structures and current human agency (cf. Ainlay 1980: 40, 50; Wuthnow *et al.* 1984: 38, 242). As Berger and Luckmann put it, “the micro-sociological or social psychological analysis of phenomena of internalization must always have as its background a macro-sociological understanding of their structural aspects” (1966: 183; also see pp. 126-27, 137). Indeed, a number of contemporary Austrian economists have drawn from the same Schutzian well as Berger and Luckmann to argue that the plan coordination that characterises free market economies is possible precisely because people’s responses to price signals are informed and guided by their shared knowledge (“typifications”) of how people who occupy particular roles will act in certain

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<sup>21</sup> The disjuncture between the “official” position that is explicitly adopted by Berger and his associates and their actual practice—with the ontological distinction between agency and structure being officially denied but inadvertently reappearing in their more substantive theorising—arguably manifests itself in the interpretive confusion to which Berger’s work has given rise. Wuthnow *et al.* (1984) contend that “given his focus on subjective meanings as the foundation of socially constructed reality, it is clear that the accent of this ontological priority is upon the individual as opposed to the collective” (p. 29), a view also expressed by Wisdom (1973: 260-61, 263). In stark contrast, echoing Stephen Ainlay’s contention that “Berger never really answers the question of human autonomy in the face of external constraints” (1980: 51), Bryan Turner concludes that Berger’s sociology “ultimately precludes agency in favor of structure” (1992: 83). While such a broad diversity of opinion might stem from the idiosyncrasy of the interpreters, it may well also reflect the confusion engendered by the gap between Berger’s explicit statements and his actual practice. That gap may also account at least in part for Nicholas Abercrombie’s verdict that, “*The Social Construction of Reality* and Berger’s other work makes its impact not because of, but in spite of, its [official] methodological innovations” (1980: 26, also see p. 30).

circumstances. The typifications in question are the Schutzian (or Bergerian) analogue of Hayek's abstract rules, in the sense that they provide the stable background knowledge that enables people to plan their responses to price signals in the confident expectation that other people will in the future do what is required to bring those plans to fruition (Ebeling 1986, 1987; Koppl 2002: 11-13, 40-55, 110-13).

But if it is indeed the case that people's interactions are structured and governed by such typifications—so that, for example, social order is possible only because people relate to one another as specified by the typifications associated with the roles/positions they occupy—then the same argument that was used to show that Hayek's account of the market order relies on emergent properties can be applied to show that what we have once more is an emergent entity, and an emergent power, namely the market system and the capacity to coordinate people's plans respectively. In short, the typifications define various roles, along with the associated rights and obligations, and thereby specify in broad terms how the incumbents of those occupy those positions should relate to one another. And the power in question is emergent because it is possessed only by a particular (emergent) whole—namely the system that is constituted by a group of people who relate to one another broadly along the lines laid down by the relevant typifications—and not by those individuals taken either in isolation. The significance of this point for the purposes of our present discussion is that it implies that if Berger and Luckmann do in fact and allow that inherited social structures shape current (interaction), thereby avoid lapsing into voluntarism, then—contrary to their explicit or “official” metaphysical claims—they are effectively treating social structure as an emergent entity that is ontologically distinct from, and irreducible to, people's current actions, and which possesses *sui generis* causal powers (cf. Bhaskar 1989: 37; Elder-Vass 2007a: 31-34).

Consider next the accusation of determinism. There are, as noted above, some passages that have been read as painting a rather mechanical picture of man as someone whose consciousness “is wholly is socially determined” (1966: 96). However, such readings ignore how Berger makes clear that, while in his consciousness is indeed rooted in the everyday world of human praxis, one should “not conceive of this rootage in terms of mechanistic causality” (1967: 128; also see Berger and Luckmann 1966: 152). In a similar vein, some of the other passages cited in support of the claim that Berger and Luckmann lapse into determinism are not as definitive as the critics seem to believe. Consider, for example, the following passage, which according to one author (Sibeon 2004: 94) exemplifies how Berger and Luckmann reduce agency to the mere plaything of social structure:

As a sign system, language has the quality of objectivity. I encounter language as a facticity external to myself and it is coercive in its effects on me. Language forces me into its patterns. I cannot use the rules of German syntax when I speak English; I cannot use words invented by my three-year-old son if I want to communicate outside the family; I must take into account prevailing standards of proper speech for various occasions, even if I would prefer my private ‘improper’ ones. (Berger and Luckmann 1966: 53; also see p. 45)

While this passage can quite reasonably be read as acknowledging social structures such as language possess the causal power to condition and shape people's actions, it does *not* support the



stronger claim that Berger and Luckmann see people's speech acts as being *determined* by pre-existing linguistic rules. The coercive power of an established language may mean that, when in England, people feel compelled to speak in English in order to achieve their communicative goals. But there remains plenty of scope for people to exercise agency, both because they may choose to be taciturn and also because the necessity of speaking English does not of course determine what it is that one says. While people's actions may indeed be channelled by predefined patterns of conduct, then, that does not mean those actions are uniquely determined by such objectivations (Berger 1966: 112-13).

Moreover, while admitting that his position is "pessimistic ... [and] probably 'conservative'" (Berger, quoted in Abercrombie 1980: 29-30), in the sense of being sceptical about the scope for people to break free of social routines, Berger and his associates *do* acknowledge that people are capable of genuine acts of freedom that see them slip the shackles imposed by inherited modes of thought and deed. "[E]ven in extreme situations of constraining structures," Berger (1980: 223) writes, "there are openings for autonomously inspired actions by individuals and groups of individuals":

[B]y providing a stable background in terms of which human activity may proceed with a minimum of decision-making most of the time, [a reliance on typified routines] ... opens up a foreground for deliberation and innovation. (Berger and Luckmann 1966: 71; also see p. 150)

Since all social systems were created by men, it follows that men can also change them. (Berger 1966: 149)

In particular, exposure to alternative cultures, and also the pressure of having to deal with the conflicting demands of the various roles they occupy, can prompt people to question hitherto established beliefs and values, thereby eroding the taken-for-granted certainties of everyday life and opening up the possibility of people braving the opprobrium of their peers and breaking away from established ways of life (Berger 1966: 62-66, 145-66; Berger and Luckmann 1966: 166-68, 190-93). The way which rise of Christian thought arose as a result of a series of heretical challenges to established theological traditions, Berger and Luckmann observe, provides a clear example of such innovative behavior (1966: 125; also see pp. 143-46). While Berger and his associates might not place as much emphasis on such creative "experimentation at the margin" as Hayek (Hayek 1960: 62-63), they certainly allow that individuals are at times willing to brave the opprobrium of their peers by breaking away from established social rules and traditions. In the final reckoning, then, the balance of evidence indicates that Berger and Luckmann acknowledge the emergent causal power of human agents to choose their preferred course of action, and to initiate new and innovative lines of conduct, more consistently than their critics suggest.

## 7. CONCLUSION

The conclusion to which this argument leads is that in practice Berger and Luckmann's approach relies more heavily on emergent causal powers, both of people and also of social structures, then

their official methodology would suggest. To put this point slightly differently, we might say that Berger and Luckmann's official, explicit account of the nature of the structure-agency relationship does not keep pace with his own substantive theorizing. While the former regards social structure as ontologically reducible to human agency and eschews emergent social properties, the latter implicitly presupposes social structures are ontologically reducible to human agency, not least because such structures are the bearers of emergent causal powers. An explicit acknowledgement of the existence of such powers would help to deflect the charges of voluntarism that have been laid at Berger and Luckmann's door: If people possess the emergent causal power to question established traditions and institutions, and to initiate new lines of conduct, then the charge of determinism is avoided (for the latter implies people have no causal powers); and if it also acknowledged that social structures have their own emergent causal powers, then the charge of voluntarism too can be repelled (for in that case, one has an account of the how people's actions are shaped by the social rules and relations that form the context for current action).

Berger and Luckmann's reluctance to acknowledge the ontological irreducibility of social structure, and the existence of emergent causal powers, may well be a desire to avoid the danger of reification: "The basic 'recipe' for the reification of institutions," Berger and Luckmann (1966: 107) caution, "is to bestow on them an ontological status independent of human activity." The key word here is "independently." The account of social emergent properties advanced here does not reify those properties by suggesting that they exist independently of individuals. Social structures are always composed, at least in part, of individuals; but such structures may have causal powers that are quite distinct from those of their individual human parts (i.e. they may possess causal powers in their own right). On the contrary, the continued existence of the relations that organize people's interactions into the form of an emergent whole cannot be taken for granted is a *contingent* matter, depending upon people continuing to act in a way that sustains those relations. It is certainly possible countervailing causes may, by disrupting the relations that hold an emergent entity together, destroy its structure and break it up into its constituent parts (as when a chemical reaction dissolves the chemical bonds that hold hydrogen and oxygen atoms together in the form of water molecules, or when restrictions on trade encourage people to seek greater self-sufficiency, thereby reducing the extent of the division of labor) (Elder-Vass 2007a: 29-30, 31).

It should be clear, then, that claiming that people and social structures have different properties—that people have the (emergent) causal power to interpret and assign meaning to events and to behave purposefully, for example, while social structures lack those particular capacities but possess instead the capacity to coordinate people's actions—does *not* commit one to denying that the continued existence of such structures depends on human activity. What acknowledging the existence of emergent entities and properties *does* imply, though, is that the human agency upon which the continued existence of social structures depends is itself shaped by the structures that govern how the people who exercise such agency relate to one another. On this view, we have noted, social structures and human agency are best viewed as being recursively related—each is both a precondition for and a consequence of the other—and dynamically interactive: people continuously draw on (pre-existing) social structures in order to act; and their actions (subsequently) lead either to the reproduction or the transformation of those structures (Elder-Vass 2007a: 39-40; Lewis 2005b: 92-97).

Overall, then, the strengths of the emergentist perspective is that it accepts that entities at many levels can have causal powers, and that these powers interact to produce actual events. And because it allows for multiple determination and the interacting powers of both individuals and social entities, emergentism enables us to show that social structure can influence individuals without determining their actions or reducing them to cultural dupes, since they maintain the (emergent) causal capacity to do otherwise. Thus, determinism is avoided, but without committing us to the other extreme of voluntarism, since people's choices are themselves causally influenced by the set of dispositions that individuals have acquired from their social experience and context.

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