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Israel Kirzner on Coordination and Discovery: A Comment

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Abstract
Klein and Briggeman (K-B) criticize Israel Kirzner for advancing a concept of coordination (dovetail coordination) that implies over-strong claims about the results of entrepreneurial action. Instead, K-B propose the "looser" conception of "concatenate coordination" associated (they argue) with Smith and Hayek. This paper criticizes Kirzner's view that entrepreneurial activity is always and necessarily coordinative (in a dovetail sense) and to this extent supports the K-B critique. It also argues that the concept of "concatenate coordination" well describes the continual efforts by individual entrepreneurs to discover new opportunities and reallocate resources whether across markets or within firms. When applied to the "spontaneous order" observed in a market cosmos, however, it is not clear that this order should necessarily be aesthetically or otherwise satisfying to any mind imagined to behold it. The coordination of a market catallaxy might, in principle, be satisfying or unsatisfying to the beholder – and therefore is not well described as concatenate coordination. A catallaxy simply goes on, and (like the natural world) is, in principle, amenable to purely scientific investigation. This in no way prevents classical liberal philosophers and economists from explaining why such a catallaxy can be expected to produce an evolving order that is satisfying to an "imaginary benevolent being."

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I. The Focus of the Debate

The debate between Klein and Briggeman (2010) – henceforth K-B – and Israel Kirzner (2010) over the nature and history of the concept of "coordination" in economics presents such a thicket of intertwined issues that a commentator venturing inside naturally fears entanglement to the point where escape is impossible and further struggle simply makes things worse. To begin, therefore, it is prudent to snip away a few briars upon which the present contributor would prefer not to become hooked. Although this comment will certainly be concerned with some notable historical contributions to the discipline, the doctrinal history that to some extent runs through K-B's critique of Kirzner – and to which Kirzner takes strong exception – will not be discussed. Whether it is reasonable to interpret Kirzner's approach to entrepreneurship and coordination as flowing from Mises' methodology of science, or whether and in what particular respects Hayek's writing departed from this tradition and is incompatible with the work of Mises (and therefore Kirzner), are not issues upon which I am sufficiently knowledgeable to pronounce.

At the center of this exchange between K-B and Kirzner is a debate about whether the fact of economic change can be reconciled with some positive understanding of the coordinative properties of market processes. Both parties (in my interpretation) would assert that a dynamic and changing market system is in some sense coordinated. Both seem to agree that the agents of this coordination are entrepreneurs. So what is the problem? The issue seems to focus on the nature of this market coordination. K-B object to what they see as Kirzner's very strong conception of coordination in terms of "dovetailing" – a metaphor based upon the locking together of different pieces of wood by means of a dovetail joint – a dovetailing necessarily advanced (in Kirzner's system) by entrepreneurial action. The criticism of this conception is that it is too "rigid," precise, and "determinate." K-B propose instead a different conception of coordination that they call "concatenate coordination." The metaphor is more of "connection as of chain-links" (to use the definition given in the Pocket Oxford Dictionary) – presumably looser and more flexible than the dovetail joint. The result is a pattern "satisfying, pleasing, or even beautiful to a mind imagined to behold it" (Klein and Briggeman, 2010, p.5). They recommend a discipline that is more accepting of "the loose, vague and indeterminate."

Interpreting this division of opinion requires some assessment of its significance. Is it a purely aesthetic matter of differing imagery? Is it a semantic dispute over the meanings of certain words? Is it related to the persuasiveness of the case for the market system and classical liberalism more generally? Does it reflect a scientific disagreement about the nature of the economic system and implicitly contain a clash of competing theories, or does it reflect disagreement about how most accurately (not necessarily persuasively) to specify a theoretical model that is in fact held in common by the two parties? Kirzner, in his reply to K-B, argues that a considerable part of their critique is based either upon semantic misunderstanding or on a wish to advance a normative rather than positive scientific agenda. Indeed he claims that the K-B concept of concatenate coordination cannot be interpreted in anything but a normative sense and protests that he himself has never placed "heavy doctrinal weight on the normative coordination concept itself" (Kirzner, 2010, p.63).

In this comment I will argue that there are more than semantic and aesthetic issues at stake here and that the dispute is part of the long-running debate in economics on the problem of reconciling primarily static analytical tools with an inherently dynamic subject matter. I will argue that Kirzner's framework fits into a tradition that treats the concepts of full economic coordination, "equilibrium" or a "stationary state," as effectively synonymous. Kirzner's approach to economic theory is to compare actual economic circumstances with an idealised benchmark of full coordination (where resources are nicely dovetailed) and where the potential for further entrepreneurial profit has been exhausted. His highly distinctive contribution to this tradition is fully to explore the role of the entrepreneur in discovering and then, through the establishment of new trading patterns, realizing the gains to trade that would otherwise remain latent and undeveloped.[1] Kirzner's analysis is dynamic in the sense that he wishes to explain the processes of change and has advanced our understanding of the nature and rewards accruing to the agents of change, but his dynamic theory rests on the proposition that all entrepreneurial action has a systematic equilibrating and hence coordinating property as the gains to trade are uncovered and the conceptual benchmark of full coordination is approached.

The main objection leveled at this tradition by K-B is that in many situations the proposition that entrepreneurial action will be conducive to coordination in Kirzner's "dovetail" sense cannot be relied upon. Perhaps entrepreneurial action will sometimes be disruptive rather than coordinative – as in the case of a major technological change or even (they argue) the publication of an influential book full of erroneous ideas. A concept of concatenate coordination, however, would allow us to describe a market system as coordinated, even when in a state of flux, on the grounds that

[1] See, for example, Kirzner (1973, 1979, 1989), and as discussed in Ricketts (1992).

dynamic entrepreneurial forces are "usually" coordinative and will generally result in a pattern satisfying to some "imaginary benevolent being."

II. Entrepreneurship and Coordination

Kirzner's insistence on the coordinative properties of entrepreneurial action is certainly vulnerable to some significant objections. In my (Ricketts, 1992) critique of Kirzner I particularly emphasized the point that entrepreneurial intervention of the Schumpeterian variety – the introduction of massive and disruptive technological innovation – is very difficult to fit into Kirzner's framework. Using neoclassical terminology we might see Schumpeter's entrepreneur as shifting outward the production possibility frontier of the economy, thus creating new possibilities for Kirznerian entrepreneurs to discover. The full potential of the new technology is then gradually exploited. A large technological change renders old trading patterns inefficient. What had represented a state of dovetail coordination now is revealed to be "discoordinated" in Kirzner's sense and to embody Kirznerian "error."

In his reply to K-B, Kirzner addresses this issue of "disruptive" entrepreneurship but is resolute in his defense of his own system and argues that the dispute is about terminology rather than substance. "The changes in market conditions…may certainly be seen…as 'disruptive.'…But it cannot, surely, be denied that these 'disruptive' changes express the new dovetail-joints being forged, now, between hitherto uncoordinated potential decision makers." In other words, Kirzner is unwilling to distinguish between Schumpeter's conception of entrepreneurship and his own. Both are alert to new possibilities and both are, in his sense, in the business of forging new dovetail joints and thus coordinating economic activity.

To the present writer this defense has never seemed entirely persuasive. The point is simply that the forging of the new dovetail joints is at the cost of destroying the old ones. Kirzner did not add "and the dovetail joints being broken, now, between hitherto coordinated actual decision makers" to the end of the sentence quoted in the above paragraph describing the disruption to established patterns. At an earlier point in time these old dovetail joints did exist. They themselves were the result of entrepreneurial forging and the discovery of error and, for a time, we might presumably have described the situation as "coordinated." Suddenly, we are asked to accept that what we thought was a coordinated market was not actually so, and new entrepreneurial intervention has revealed the opportunities that we were still missing. Kirzner emphasizes the grasping of the new opportunities and describes that process as "coordination." He is not prepared to concede that this process must also simultaneously to some extent "undo" prior coordination. Kirzner's likely response, of course, is that the new profit opportunities being grasped *reveal* rather than *create* the complained-of discoordination. The situation turned out to be uncoordinated all along although the "error" was still awaiting discovery.

If this argument is accepted, however, it must imply that Kirzner's system will not permit us to state that any situation, even a local and provisional one, is fully coordinated unless a final general equilibrium has been achieved. As long as entrepreneurs are active, error is being discovered. The dilemma for Kirzner is that he wishes to characterize the entrepreneur as an agent of coordination even though continual change must imply the "absence of full dovetail coordination" at any given point in time, and even though the state of full dovetail coordination to which the entrepreneur is driving the system is unknown. From the point of view of the system, all we actually know is that entrepreneurs take us from one uncoordinated state to another uncoordinated state through a process that Kirzner would argue is one of progressively enhanced coordination relative to the unknown ideal. The *process* is "coordinating" even if the provisional and changing *results* cannot be described as fully coordinated, with the plans and expectations of all transactors fully dovetailed.

My interpretation of K-B's criticism is therefore that Kirzner's conceptual framework cannot be used to demonstrate the coordinating effect of entrepreneurial action in a market system except as a kind of tautology. In the appropriate institutional and property rights setting, entrepreneurial profits imply gains to trade; new gains to trade imply greater coordination; ergo entrepreneurs must forge trading links that can be described as coordinative. It is no good complaining that entrepreneurs might infringe property rights or undermine trust between long-term contractors because Kirzner can easily reply that his analysis only applies to situations in which property entitlements are clear and all agreements are enforceable at low cost. It is no good claiming that newly discovered gains to trade for a subgroup of transactors might involve huge dislocation to hitherto dovetailed plans elsewhere in the economy because evaluating this "disruption" is a normative matter and does not affect the claim that these disrupted plans were anyway not dovetailed at all (even if they looked "benignly stable" (Kirzner, 2010, p.70) and had lasted a long time) but were already discoordinated as a matter of definition.

III. Prices and Production

Given the comparisons made between Hayek and Kirzner in the K-B critique, it is worthwhile to consider Hayek's attempt in the 1930s at "bridging the gulf between 'statics' and 'dynamics'" (Hayek, 1939, p.137). The issues were very similar even if the context (explaining periodic economic "crises") was different. In Hayek (1931, lecture 2) the structure of Austrian capital theory is set out. In this theory, final consumers' goods are produced in a series of stages in which value is added by the application of labor and natural resources over time. The capital stock is effectively (in the simplest version of the theory) made up of circulating capital – uncompleted consumers' goods at all stages of the production process. The longer the period of production, the more the production process could be broken down into stages and the advantages of division of labor could be more effectively exploited. A longer, more "roundabout" production process implied a greater flow of output and a longer average period of production or ratio of capital to output.

The relevance of this theory for our present purposes is that it was central to Hayek's analysis of industrial fluctuations. If uncompleted goods were to be held to the next period, businesspeople would require their value to rise over time at the rate of interest. This interest rate would ideally represent the time preference of consumers and the reward required for "waiting." Lower interest rates reflecting a decline in time preference and more patient consumers would mean that the price margins established between production stages would be wider than required to reward the waiting involved. Net saving would be channelled into a greater capital stock, the production period would lengthen, and price margins would adjust downward to reflect the lower time preference rate. The higher capital stock would then support a greater long-term rate of consumption stretching into the future, net saving would cease, and a new stationary state would be established. "If entrepreneurs entertain correct views about the price changes that are to be expected as a result of the changes in the method of production, the new interest rate should correspond to the system of price margins which will ultimately be established" (Hayek, 1931, p.84).

This reasoning implied that the structure of production was a complex interrelated system requiring that intermediate goods prices and the interest rate were appropriately adjusted. Furthermore, entrepreneurs had correctly to anticipate the effects of changes in interest rates on production methods and goods prices. If their expectations were disappointed, a new equilibrium would not be established. "The assumptions of this kind which are implied in the concept of equilibrium are essentially that everyone foresees the future correctly and that this foresight includes not only the changes in the objective data but also the behavior of all the other people with whom he expects to perform economic transactions" (Hayek, 1939, pp.139-140).

From this brief description of Hayek's theory, it is clear that his notion of equilibrium and Kirzner's concept of dovetail coordination are completely at one. On the other hand, the context of Hayek's exposition is his analysis of industrial fluctuations and the danger of discoordination. Here the culprit was monetary disturbance. Monetary expansion leading to the depression of market interest rates below the true time preference of consumers would mislead entrepreneurs and induce false expectations. The lengthening of the production period and the greater capital stock would not in the end be warranted, and the "saving" used to expand the capital stock would be "forced saving" induced by unexpected inflation, leading to disappointed consumers. The "lengthening" of the production process, argued Hayek (1931, p.135) would be unsustainable. "These elongations…are likely to be partly or wholly reversed as soon as the cause of the forced saving disappears." The return to a shorter, less capital intensive, structure of production constitutes the economic crisis or depression.

The point at issue here is not the coherence of Austrian capital theory or Hayek's use of the theory as part of his explanation of business fluctuations but his approach to coordination and the price system. The model he presents has at its core a "stationary state" of dovetailed expectations. Entrepreneurs, however, cannot be relied upon to act in ways that always support coordination. They can be misled by false price signals deriving from monetary disturbances. Hayek clearly has no confidence that entrepreneurs will adjust their behavior to take account of the distorting effects of the monetary lenses through which they are viewing the world. He expects that they will be fooled and that their transactions will lead to discoordination and a crisis. On the other hand, with monetary authorities committed to avoiding these distortions, Hayek can be interpreted as taking the view that entrepreneurs will not make systematic errors. With stable monetary conditions (assuming such conditions can be contrived) there is little to separate Hayek's view and Kirzner's view of the coordination brought about by entrepreneurs.[2]

Seen in this light, therefore, it is possible to view the criticism leveled at Hayek from some sources in the late 1930s as relevant to the interpretation of the K-B critique of Kirzner. Hicks, (1939, p.117) for example, criticizes the method of the Austrian theorists whose "hall-mark is concentration on the case of a Stationary State." "Although it would always be recognized that the actual state of any real economy is never in fact stationary, nevertheless stationary-state theorists naturally regarded reality as 'tending' towards stationariness; though the existence of such a tendency is more than questionable" (p.119). Dynamic disequilibrium, all agree, is a divergence between expected and realized prices, between plans and outcomes. All agree that such divergence implies wasted resources and malinvestment. Yet Hicks does not accept that dynamic disequilibrium will necessarily be corrected by the spontaneous responses of entrepreneurs.[3] Kirzner would presumably argue that his approach to entrepreneurship permits him to assert that the lure of entrepreneurial profit is none other than the mechanism by which dynamic coordination of plans and outcomes is advanced, and certainly establishes the existence of the coordinating force that Hicks claims is open to question.

The position of K-B is not that of Hicks, but neither is it Kirznerian in its confidence that all entrepreneurial action "tends"

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[2] As, indeed, Kirzner (2010, fn 10, pp.66-67) points out in his reply to K-B.

[3] Another notable critic of Hayek's position was Shackle (1967). As Boehm (1992, p.9) states, "What Shackle finds so irritating about Hayek is that in the latter's most austere account, in Prices and Production (1931), market forces could always be relied upon, barring monetary disturbances, to tend towards an equilibrium position."

toward a dynamic equilibrium. They prefer the looser conception of a system changing over time in ways that can be described as "ordered" or coordinated (by some onlooker) but not necessarily always and at all times moving toward equilibrium. Kirzner claims that this conception is inherently normative: "Concatenate coordination…has meaning *only* at the normative level" (Kirzner, 2010, p.66) and reveals an "apparent refusal to recognise an objective science of pure economics" (p.72). The validity of Kirzner's position here depends upon how the K-B definition of concatenate coordination is interpreted. In the following section the question is explored of whether it is possible to present a version of concatenate coordination that is non-normative.

IV. Spontaneous Order

It is an interesting feature of the critical reception of Hayek's work that whereas his attempts to grapple with the structure of production and with the causes of instability and industrial fluctuations in the 1930s were seen as under the "baneful influence" (as Hicks expressed it) of the stationary state, his writings on the price system and the nature of the competitive process as well as his debates with Lange over socialist calculation were seen as lacking in general equilibrium rigour. By the late 1930s, general equilibrium analysis was "becoming the standard for theoretical sophistication in microeconomics, in terms of which Austrian price theory stood condemned as antediluvian" (Blaug, 1992, p.33). It is one of those quirks of fate that Hayek seems to have annoyed his critics for apparently diametrically opposed reasons even though he was exploring dynamic issues from a consistent intellectual position all along.

When discussing the operation of the price system, Hayek famously saw the competitive system as a means of spreading and using information that must initially be uncovered locally by some individual or group of individuals. Long before "The Use of Knowledge in Society" (Hayek, 1945), he describes (Hayek, 1935, p.25) market processes as disseminating adjustments to new knowledge through a whole connecting chain of market linkages. A person noticing a new use for tin, for example, will take actions that will create market gaps that will "in turn be filled from other sources." The effect will rapidly spread throughout the whole economic system. The whole acts as one market…because [its members' limited fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all." Kirzner would surely approve of this conception of a dynamic "trial and error" process converging toward equilibrium.

Hayek's market transactors do not all deal at the same price of tin (unlike Lange's socialist administrators) except when all adjustments have been completed and information has fully percolated through to all participants. At each stage entrepreneurial judgement is exercised and prices are negotiated rather than simply "taken." Of course, the closer equilibrium is approached, the more likely it is that widely spread knowledge will give transactors similar expectations of the "market price" that they become content to accept. But this "single price" simply signals arrival at full coordination and the establishment of "equilibrium." It is not a condition of a "competitive" market. For Hayek, as for all Austrian theorists, competition is about dynamic processes, and dynamic processes cannot be analysed under the "baneful influence" of general equilibrium theory.

This conception of a competitive system changing over time as entrepreneurs explore profitable opportunities and make increasing use of the information available to them is (presumably) not a controversial one for either Kirzner or K-B. However, as Hayek moved further into social philosophy in his later work, he interpreted his system in a way that does seem to have relevance to the present dispute about economic coordination. In particular, he characterized the competitive system as giving rise to a particular type of "order." Correctly interpreted, he argued, an economy proper is an organization that seeks defined ends. "It describes a complex of deliberately co-ordinated actions serving a single scale of ends" (Hayek, 1976, p.108). In contrast, "the cosmos of the market" is a "system of numerous interrelated economies." Hayek proposes to adopt the term *catallaxy* "to describe the order brought about by the mutual adjustment of many individual economies in a market. *A catallaxy is thus the special kind of spontaneous order produced by the market through people acting within the rules of the law of property, tort and contract."*

The mere introduction of terminology is useful, of course, only in so far as it helps to clarify the ultimate sources of disagreement. Hayek's proposed definition of an "economy" is very liable to sow confusion because (whatever the etymological derivation of the word) our conventional view of an "economy" is probably closer to Hayek's definition of the overall "market cosmos" than the "deliberately coordinated actions" that tend to be associated more with the individual "organization" or "firm". The term catallaxy (apparently first proposed by Whately (1855) and later by Mises (1949)) is not used by either Kirzner or by K-B. It is possible, however, to consider the present dispute by comparing the alternative proposed definitions of market coordination with Hayek's catallaxy. I will argue that the term is neither fully Kirznerian nor fully in the spirit of K-B but preserves something of each – implicitly a "looser" concept of coordination than Kirzner's dovetail joints, but a more economically focused and potentially non-normative concept than that of K-B.

Hayek (1976, p. 107) describes the market order as "bringing about a certain correspondence between the expectations of the different persons." However, he goes on to write that "this manner of co-ordinating individual actions will secure a high degree of coincidence of expectations…only at the price of *a constant disappointment of some expectations"* (my emphasis). The language here is revealing because it is clear that the market produces an "order" and that it can be said to be a method of "co-ordinating individual actions." The "constant disappointment" associated with the catallaxy suggests that it is in a state of flux, but the existence of disappointed expectations does not mean that the system is "uncoordinated" – just still moving on.

Hayek's catallaxy and Kirzner's entrepreneurial competitive process are clearly closely related. Certainly it is difficult to see where Kirzner would take strong exception unless the "constant disappointment of some expectations" were read as implying (along with K-B) that entrepreneurs sometimes failed in their coordinating role and only "usually" succeeded. Actually, Hayek (1976, p.117) might be interpreted as advancing just such a position when he writes (of market remunerations) that they "are incentives which *as a rule* (my emphasis) guide people to success, but will produce a viable order only because they often disappoint the expectations they have caused when relevant circumstances have unexpectedly changed. It is one of the chief tasks of competition to show which plans are false." Hayek does seem to have been content with statements that are altogether less categorical than are Kirzner's concerning the necessity of the coordinating impact of entrepreneurship – at least in terms of dovetailing.[4]

If Hayek's exposition of the catallaxy is looser than Kirzner's, it is not entirely clear that it is necessarily normative. K-B (2010, p.7) argue that spontaneous order is a type of concatenate coordination seen as desirable by a "fictitious mind able to behold the extensive tapestry of social affairs…." Kirzner argues emphatically that this conception is incompatible with a positive science of economics. It is true that Hayek (1933, pp.26-27) postulated that "necessary functions" were discharged by "spontaneous institutions" that "at first we did not even understand when we saw them" and that we mistakenly "refuse to recognize that society is an organism and not an organization." The idea, however, that a spontaneous "organic" order can nevertheless "make sense" to an outside fictitious mind does not automatically imply that it must make only normative sense – that it is merely pleasing to the aesthetic or moral sensibilities of the observer. The important scientific question is simply whether it makes some sense – whether the observed "order" is explicable.

A scientist looking at the evolved and interdependent diversity of life on earth is investigating a complex "natural order." This natural order is not (except perhaps for people of very strong religious convictions) the product of a single mind. The dynamic processes of change are governed by natural forces that can be scientifically studied even though the complexity of the system can make predictions as difficult as those faced by economists in predicting the consequences of intervening in market processes. There is no doubt that the natural history of the planet is the subject of awe and is often considered beautiful and good – not least because the survival of the human race depends upon its place in the natural order. But such normative considerations are not usually advanced as reasons to doubt the possibility of a purely scientific understanding. Similarly, the fact that Hayek and most "classical liberals" regard a catallaxy as a type of order peculiarly well suited to advance the general well-being of all its participants should not, in principle, prevent the purely scientific investigation of its properties.

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[4] It should be noted, however, that Kirzner (1992, p.93) in spite of his insistence on the dovetailing brought about by entrepreneurs, seems to distinguish this from a more general concept of "social coordination." "No-one claims that all opportunities grasped entrepreneurially must be socially coordinative."

V. Concluding Comments

The use of the term concatenate coordination in the K-B critique of Kirzner is intended to widen and loosen what K-B see as a rather rigid concept of dovetail coordination. The latter implicitly invokes a meshing of plans and actions that relates to a final static equilibrium (even if this is never actually realized), whereas the former is compatible with any order that a fictitious outside mind finds suitable and pleasing. The ultimate purpose of both Kirzner and K-B is to expound a theory of market process, even if K-B are inclined to emphasize the normative side of the theory and Kirzner declares himself to be more concerned with positive economics.

I have argued that Hayek's use of the term "catallaxy" is perhaps the most suited to describing a dynamic and evolving order and that therefore "catallactic coordination" would be an apposite choice of terminology. K-B regard Hayek's spontaneous order as an example of "concatenate coordination," but this seems to involve them in somewhat abstract philosophical propositions about the judgments of a fictitious mind. The spontaneous order is proceeding *"as if"* it were actually coordinated by some conscious mind (presumably attached to an invisible hand). The transitive use of the verb "to coordinate" that K-B invoke (2010, p.8) clearly applies to the entrepreneurs who try to order whatever pieces of the overall system they influence. Looked at as the result of entirely local entrepreneurial decision-making, therefore, the overall catallaxy is the union of many attempts to achieve concatenate coordination within (to use Hayek's phrase) "limited but overlapping fields of vision." If the main purpose of K-B's proposed terminology is to distinguish clearly between coordination brought about through conscious entrepreneurial efforts to direct the future and the old neoclassical static conception of equilibrium prices that produced dovetail coordination without anyone apparently having to be aware of coordinating anything at all, the present writer would not find much cause to criticize. However, there are great difficulties with the application of the term concatenate coordination to an overall spontaneous order that K-B recognize and discuss but do not overcome. Kirzner's suspicions of the application of the term to a spontaneous order are therefore justified, although his description of concatenate coordination as "central planner's coordination" is tendentious; "planners' coordination" or (perhaps less liable to misunderstanding) "entrepreneurs' coordination" would be a fairer description. It was, after all, Hayek (1976, p.109) who described his catallaxy as being composed of "many individual economies."

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