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An Introduction to Spontaneous Orders

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Introduction

What do we mean by the word “market?” As it turns out, the colloquial meaning and the meaning in mainstream neoclassical economics are quite different. When we think of “a market” in its everyday sense, perhaps our inner eye envisions a bazaar, or perhaps a shopping mall. This is not at all the meaning that most economists ascribe to the term. Instead, it refers to the aggregate of all exchanges of a specific good for money in a specific time period, and models of such markets rest on numerous more or less realistic assumptions. In “perfectly competitive markets,” for example, a large number of sellers sell a uniform (“homogeneous”) good to a large number of buyers, and all market participants have sufficient information and cognitive capacity to ensure productive efficiency, a uniform market price, and zero economic profits. The sellers do not do better (or worse) than breaking even, even though they maximize profits. The buyers are content with their quantity of consumption at the given market price, because the principle of utility maximization ensures that the marginal opportunity cost of each good equals its price.

But there is an older tradition within economics that views markets a bit more like the perception of the market participants themselves, albeit with a greater appreciation of the systemic indirect effects of market interactions. This view harks back to classical economics and Adam Smith’s (1776) notion of “the invisible hand,” whereby the interactions of market participants encourage a more efficient use of resources, greater division of labor, and a greater variety of consumer goods. This is a gradual process that takes time, unlike the static mainstream model that students first encounter in introductory textbooks. Thus in classical economics, a market is a continuously evolving process that may involve different numbers of firms, new production technologies, and new specialization as the economy develops.



Friedrich August Hayek

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In the 20th century, the Austrian economist Friedrich August Hayek elaborated on Smith's original insight by viewing markets as a "spontaneous order." He adopted a term which was first used by Michael Polanyi to describe self-organization in scientific research (Polanyi, 1941; 1962). But it is clear that Hayek's use of spontaneous-order thinking predates his explicit use of the term. Already in 1945, Hayek wrote that



[price] adjustments are probably never "perfect" in the sense in which the economist conceives of them in his equilibrium analysis. But I fear that our theoretical habits of approaching the problem with the assumption of more or less perfect knowledge on the part of almost everyone has made us somewhat blind to the true function of the price mechanism and led us to apply rather misleading standards in judging its efficiency. The marvel is that in a case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its product more sparingly; i.e., they move in the right direction. This is enough of a marvel even if, in a constantly changing world, not all will hit it off so perfectly that their profit rates will always be maintained at the same constant or "normal" level. (Hayek, 1945)

2. Markets as Spontaneous Orders

The “marvel” that Hayek is referring to in the quoted paragraph is the fact that markets exhibit an orderly structure of exchange relationships, even though no conscious plan has been formulated to pursue this. The market order is self-organizing. The decentralized actions of thousands or millions of market actors ensure that exchange ratios—market prices—will emerge. These prices distill decentralized information about relative scarcities in a multitude of interconnected localities. There is no shared goal that these actors are pursuing. They may have little in common, and may believe in different philosophies or religions, and yet their interactions cause a relative price to emerge that coordinates their actions. This price reflects local knowledge about relative scarcities in specific places at specific times, which depends on network interdependencies among an enormous number of idiosyncratic producers and consumers. In the absence of perfect knowledge, we can no longer assume that all producers use the “best” technology or that all consumers know how to ensure equal opportunity costs at the margin. Everyone is striving to improve their situation, but as a rule they do not achieve an optimal production technology or an optimal “basket” of consumer goods. Still, market prices nudge them in the direction of greater efficiency, even if they never become efficient in the absolute sense of textbook models of market equilibrium.

How does this order come about? There are a few necessary conditions. First, in an approximate sense there must be agreement most of the time about who owns what, and these owners must for the most part be secure in the knowledge that the resources that they own will stay in their possession if they do not sell them or give them away. That is to say that there must be relatively well-defined property rights, and a legal system that protects holders of these rights. The people who are trading goods and services must know what they are trading—and how long they can keep

what they have bought—in order for reliable prices to emerge. This implies that the vast majority of participants in a market must comply with the rules of property and contract. Rule-following is one necessary condition for the emergence and retention of a spontaneous order.

Another necessary condition is that there must be a systemic resource that spontaneous order participants seek to accumulate. In the market order, this resource is money. Accumulation of money signifies market success. Loss of money equals failure, and repeated losses imply exit. Thus bankruptcy laws are an essential component of the spontaneous market order. The combination of a reliable legal system that protects property and enforces contracts, a stable currency that enables the emergence of prices that reflect dispersed local knowledge of scarcities and opportunities, and a set of buyers and sellers who follow the rules of the market are the necessary components. With these in place, a self-organizing orderly market becomes possible. And it is this that we refer to when we use the term “market order” as shorthand for the specific spontaneous order of interrelated markets.

It is clear however that real-world markets may reach different levels of conformity with the ideal. Perfection is not necessary for the emergence of a spontaneous order. It is more helpful to think in terms of thresholds, or in terms of market-specific flaws. The real spontaneous orders that we observe all have flaws, unlike the (unreal) neoclassical model of perfect competition. A legal system may for instance enforce property rights as a general rule, but it is never perfect. There may be boundary conflicts between neighbors. Some judges may have less than perfect integrity. Certain more efficient uses of a resource may violate government regulations. The list of potential imperfections is not a short one.



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There is also the question of resource distribution. Remember that the demand, or the “willingness to pay,” depends on more than consumer preferences. It also depends on the potential buyers’ purchasing power, which reflects expected future earnings, current income, and accumulated assets. If most of the purchasing power is limited to a tiny segment of the population, as is often the case for isolated (i.e. autarkic) markets in the least developed countries, it becomes impossible for prices to reflect more than a fragment of the local knowledge that is embedded in the most developed and globalized markets. If, as is often the case, the isolated small market is also embedded in an environment of unpredictable expropriations and untrammelled corruption, rule-following may become pointless. Thus in such a case the “market” is no longer a market in the sense of a spontaneous order, and the observable “market prices” may be as hopeless at directing human activities in more value-productive directions as the administered prices of *Gosplan* (i.e., the State Planning Committee in the Soviet Union).

In certain conditions, the spontaneous order of a market may resemble the market of a neoclassical equilibrium model, although it is unlikely to retain those feature for more than a limited time period. A mature market for a popular and simple good with negligible economies of scale may resemble a perfectly competitive market, if we assume that it is embedded within a well-functioning

institutional structure. The market price may be almost the same, regardless of the seller. In fact, there may in fact be a single market price if one keeps all non-homogeneous factors constant, such as the relative ease at which buyers can reach sellers. It may even be the case that all the sellers are in the vicinity of the break-even point. All the numerous sellers sell a good that is identical or at least very similar; they all charge about the same price, and the costs of the inputs are approximately equal for everyone. One example could be the price charged by street vendors of a standardized popular dish, such as fried rice in many Asian countries. In a big city, thousands of street vendors may sell no-frills fried rice to hundreds of thousands of customers on any given day at more or less the same price. Perhaps the dish is a bit more expensive in the downtown area, but this may just be a reflection of higher rent for the patch of sidewalk that the vendor occupies. So the price, shorn of its location-dependent component, may still be the same.

While this example may seem to rehabilitate the neoclassical equilibrium model as a good model for real-world markets, this is only occasionally the case. The key criterion here is whether market feedback compels market participants to act as if they have perfect information about relevant market prices. In a mature market for a popular standardized good with negligible scale economies this may sometimes be the case for the producer/seller, as in our hypothetical case with street vendors of fried rice. But even here the mainstream model is misleading on the consumer side of the market.

The spontaneous order framework puts order-specific feedback, and the information that the feedback conveys, at the forefront of the analysis. On the producer side, prices constitute feedback, and prices convey information about market conditions that nudge them in the direction of more efficient combinations of inputs such as raw materials, human capital, machines, and land. But even more important is the fact that highly inefficient production techniques result in output prices and quantities sold (revenue) that cannot cover the costs of the inputs. The order constrains the producers



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in their choice of which mixture of inputs to use.

Consumers face a more permissive market. True, they receive information when they observe market prices. But the market does not punish consumers who make inefficient choices as buyers. They may buy the same overpriced sandwich day after day without receiving any feedback about their inferior choices, even if they could have bought a better-tasting sandwich at a lower price around the corner from the café they habitually patronize. Consumer preferences are subjective, and the willingness to pay for a specific sandwich reflect these individual preferences as well as budget constraints, but there is also limits to how much each consumer knows. This imperfection of knowledge stems not only from unavailable information, but also from the cognitive limitations of the human mind, given the complexity of the economy and the time it takes to estimate the relative utility of a multitude of potential choices.

Inefficient consumers are not forced to exit the market. Therefore utility maximization is always misleading, unlike profit maximization, which the market order compels producers to approximate in



Herbert Simon

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those markets that resemble perfect competition. The psychologist Herbert Simon (1957) for this reason introduced the concept of “satisficing” to explain what consumers actually do. They aim for a situation that is good enough, rather than one that maximizes their utility. Later developments with a basis in psychological findings have shown that consumers may also use other strategies such as choices that reflect personal habits or gut feelings (Gigerenzer, 2008). Given the time and cognitive constraints that consumers necessarily face, there is nothing irrational about not engaging in an impossible task, which utility maximization is in all but the simplest choice contexts. The use of psychological findings as a starting point for understanding consumers’ choices is compatible with spontaneous-order theorizing but not with the neoclassical default of utility maximization.

In a path-breaking article, the Austrian economists Roger Koppl and Glen Whitman (2004) show that what really matters is the *system constraint* that an economic actor faces in a specific situation. In a competitive market, the producers faces a tight system constraint, and this implies that the real-world situation is reasonably similar to a neoclassical model for the producer. In less competitive markets, the system constraint is looser. Unlike our hypothetical fried rice vendor, the monopolist faces a loose system constraint, although not quite as loose as on the consumption side of the market. The market order does not force a monopolist to restrict output in order to maximize profits. But it does provide incentives to limit output. The system constraint only forces the monopolist to break even, at least in the long run (note that mainstream economics concedes as much in some models, with the concept of “X inefficiency”). Apart from the adoption of a somewhat inefficient production technology, the monopolist may also reduce output a bit more or a bit less than the optimal reduction from the monopolist’s standpoint. This describes the situation of a monopolist that faces buyers who choose what they want to consume. If there is a purchase guarantee, such as when a state both makes and buys its tanks, the system constraint all but disappears, and the “price” of an input may diverge dramatically from what would have been its

market price.

So far we have compared the market order with conventional mainstream models of markets, which are intrinsically static. But the key difference is the more dynamic way of thinking that a spontaneous-order framework encourages. A producer in a competitive and, thus, atomistic market may face a choice situation that resembles that of a pure price-taker under perfect competition, but will she choose to remain in this market? The textbook model does not encourage this question, unlike spontaneous-order theory. With a process perspective it becomes clear that producers are typically trying to escape a tight system constraint. This brings us to the role of the entrepreneur.

3.

Markets, Prices, and the Role of the Entrepreneur

With an assumption of perfect or sufficient knowledge, there is no role for the entrepreneur, since market participants are cognizant of market prices, efficient production technologies, and utility-maximizing consumption choices. If we instead assume imperfect knowledge, however, there is room for the entrepreneur as a key shaper of markets.

While in Hayek's writing the role of the entrepreneur is implicit and not the focus of attention, the Austrian economist Israel Kirzner (1973) adopted a Hayekian theoretical framework for explaining how entrepreneurs coordinate and transform markets. In the simplest case, assume that we have two separate markets with their own sets of buyers and sellers. It is then possible for the same good, for example one kilogram of bananas, to have a different market price in each market. The buyers and sellers may simply not have noticed the discrepancy in prices and the fact that sellers in one market are paying too much while sellers in the other market are receiving too little compared with a more coordinated situation.

According to Kirzner, the entrepreneur functions as the coordinator of previously separate markets. The entrepreneur is alert to and exploits profit opportunities arising from differences between buying and selling prices. In the simplest instance, she is a pure arbitrageur. If the entrepreneur buys bananas in the lower-priced local market, and then sells them in the higher-priced market, she earns a pure entrepreneurial profit. Such profits attract imitators, and these imitators will over time bid up the selling prices in the cheaper location, while the resulting increase in the supply in the



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dearer market will entail a gradual lowering of prices in that market. The end result is market integration and a single price for bananas. Note that this new larger market provides prices that reflect more dispersed local knowledge of relative scarcities that in the previous situation. Entrepreneurs thus act to increase the information content of prices as a side effect of their disproportionate alertness to profit opportunities.

But it is not only arbitrage that integrates markets. Innovative entrepreneurship has the same effect. An alert entrepreneur discovers that it is possible to buy cheaper inputs that are transformable into a given output, or, alternatively, she may perceive that a given set of inputs may produce an output that is more valuable than what they are used for at present. The former discovery implies process innovation, while the latter implies product innovation. Innovation is thus also an entrepreneurial act that not only transforms or creates new markets; it is also an act that coordinates previously separated markets, thereby again increasing the information content of the set of market prices, even if the increase is an incremental one.

Indeed, producers will only remain in a competitive market with zero or near-zero profits if they lack alertness or if they are in the market for other reasons than profit-seeking. The spontaneous order of the market offers high-powered incentives for breaking loose from a tight system constraint. If a vendor of fried rice creates a novel recipe—a product innovation—in response to her perception of a higher willingness to pay than the price of the inputs, she will earn an entrepreneurial profit if her perception of what consumers want is good enough.

Depending on the disruptiveness of the innovation, the entrepreneur will either have created a new market or a new market niche. If it is a new market, she will in effect have become a monopolist until a later time when imitators have managed to enter the new market. If it is a new market niche, the market will have become less homogeneous, and thus will have moved in the direction of monopolistic competition. In a market with alert entrepreneurial innovators, we can no longer regard the market structures associated with specific goods or services as fixed. Monopolies may originate from previous participants in competitive markets, and these monopolies may in turn evolve into oligopolies and then into a monopolistically competitive market with substantial product differentiation or, alternatively, into something resembling perfect competition due to the high substitutability of the competitors' offerings as most buyers perceive them.

The extent to which entrepreneurial opportunities present themselves to market participants depends to a substantial extent on the institutional structure. The dynamic market process perspective of spontaneous order theory therefore not only directs our attention to the role of entrepreneurs; it also directs our attention to institutions and, more specifically, to institutional reforms that may either expand or limit the set of entrepreneurial profit opportunities.

4.

Institutions and Entrepreneurship

We have earlier noted that the creation of reliable price signals is contingent on certain institutional prerequisites such as an impartial legal system, well-defined property rights, reliable contract enforcement, and widespread rule-following. The world's advanced economies—roughly speaking the OECD countries—provide institutional frameworks that in a general sense generate serviceable price signals in most markets, but the details differ a great deal, and there are many exceptions that in some cases affect entire industries, as well as rules that prohibit or limit opportunities for entrepreneurial profit-seeking in specific areas.

An economic actor is the holder of a bundle of property rights to resources, which means that she can exercise control over all those attributes that are included in the bundle, including control over her own labor services (Barzel, 1989). Resources such as labor services and capital goods are heterogeneous; this means that they consist of an open-ended number of valued attributes. An attribute is not an objective aspect of a good, but instead refers to individual perceptions. A consumption good such as a cup of coffee have attributes that correspond to the perceived satisfaction of various desires, such as enjoying various flavors or staying awake late at night. Productive resources have attributes that reflect their perceived contribution to various consumption attributes.

As an illustration, consider a hotel room. The consumer of the bundle of consumption attributes that corresponds to a specific hotel room may be willing to pay for several of those attributes, such as shelter, comfort, safety, aesthetic beauty, and access to destinations in the neighborhood. The room may also give rise to production attributes, such as productive benefits when used as a job interview facility.

Most goods and services are decomposable into several valuable attributes, each of which may entail up to four different types of property rights. Transfer rights refer to the ability to sell attributes or give them away. Income rights are the rights to derive income from them, as when one rents out one's apartment or one's human capital. Use rights signify the right to use attributes for consumptive or productive purposes. Exclusion rights refer to the rights of owners to decide the terms on which non-owners may use a resource. Transfer, use, and income rights can only command a market price if exclusion rights are effective.



An innovative entrepreneur may discover new and more valuable uses of existing resources. An owner of a restaurant may for example discover that a new combination of ingredients will result in a new unique sauce that should appeal to a certain niche of diners. If she is able to keep the recipe as a trade secret, and if it is difficult to come up with another recipe with a similar flavor, she may have discovered a way of creating a profitable monopoly for a substantial time period. She may even decide to exit the restaurant market and create a new market for the new unique sauce that she then exports all over the world.

But there are in many instances institutional complications or limitations that hamper entrepreneurial ventures of this kind. Take the Swedish market for single-family housing as an example. According to Swedish building regulations—a set of industry-specific institutions—all homes that are higher than two stories must install an elevator. This raises the cost of building homes with three or more floors. An entrepreneurial discovery that some people may be willing to pay more than the cost of construction for a three-story house without an elevator has thereby been excluded from the entrepreneurial opportunity set.

The elevator example is in itself trivial and in the grand scheme of things unimportant, but it serves as an introduction to a class of market interventions that have a substantial adverse effect on price formation and limits the efficiency-inducing features of the spontaneous market order. Let us consider the institutionally induced abolition of many market features in the British market for real estate. This is especially interesting since most other British markets have strong spontaneous-order characteristics.

5. A Spontaneous-order Interpretation of the English Planning Disease

The starting point of the British system of planning was the Town and Country Planning Act of 1947. According to the Act, local and national planning authorities are jointly responsible for land use planning. Each local planning authority must formulate a local development plan according to national guidelines, and it must allocate every location to a specific use class such as housing, industrial, or commercial use. In many cases a “use” is narrowly defined as a specific industry or commercial activity. Each land use conversion requires a permit from the local planning authority. This includes minor changes such as rebuilding a clothing store into a restaurant or a detached house into a bed & breakfast. The local planning authority is obliged to take the local development plan into consideration when deciding on whether to grant a permit, but may deviate from the plan if they think there are good reasons for doing so. In practice, deviations are mostly denials of permits for land uses that are compatible with the zoning principles that constitute the foundation of the local development plan.

English planning practice shows that it is almost impossible to develop land in areas that were not classified as “urban” in the 1950s. The supply of land within each use class has also been inherited from the original classification. This means that public sector planners have determined the supply of land for each urban land use category, which has had the consequence that market prices that reflect the opportunity cost of the highest-valued alternative use of a plot of land do not exist. The allocation of land to production and consumption uses thus proceeds according to the principles of a socialist planned economy as they were formulated more than sixty years ago.

In England, an even more restrictive policy was introduced in two steps in 1988 and 1996 by means of the Town Centre First policy (TCF). TCF stipulates that local planning authorities make detailed decisions about commercial land use in city centers, while implementing even greater obstacles than previously for suburban commercial development. TCF also encompasses a “needs test” and “sequential test” for every proposed commercial project. An example of the needs test is that a person who wants to open a new grocery store must show that the neighborhood “needs” more stores and that the proposed store does not adversely affect the competitiveness of existing stores in the same area. The sequential test requires the same person to show that there are no suitable city center locations in order to make a preferred suburban location permissible, and, additionally, that an exurban location can only be considered if there are no suitable suburban locations. There are in other words virtually no entrepreneurial opportunities for the establishment of shopping malls or even strip malls near freeways or in rural locations. For this reason, the last English shopping mall with freeway access (Bluewater) was established in 1999, and its permit hailed from before the introduction of the strictest version of TCF in 1996.

The British urban economist Paul Cheshire and his group (2015) estimated that TCF reduced the total factor productivity of English supermarkets by 20 percent as compared with the period before the introduction of the policy. New supermarkets have been forced to locate in logistically difficult locations that provide less space for storing and selling goods. Newly established supermarkets were more productive until 1988, but have been less productive afterwards. The productivity decline did not affect Scottish or Northern Irish supermarkets, which were not affected by TCF institutions.

However, it is likely that the English planning system as a whole entails much greater efficiency losses than 20 percent, largely because of the prevention of otherwise attainable entrepreneurial profit opportunities within a system with more reliable (i.e. informative) market pricing and more permissive rules for land use conversions.



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American supermarkets have always been more productive than their British counterparts, and American productivity growth in the supermarket subsector of retailing was especially high in the 1990s (Haskel and Sadun, 2011).

It is not only potential entrepreneurship in retailing that English planning institutions have prevented. Urban growth boundaries have had similar effects on entrepreneurship in housing, commercial activities, and industrial location choices. A noted example is the Metropolitan Green Belt, which is a statutory green belt comprising a total of more than 5,000 square kilometers around London (about seven times the land area of Singapore). The only permissible economic activity within the Green Belt is agriculture, with the consequence that the (institutionally reduced) price within the area averages £7,500 per hectare, as compared with an estimated land value of about £7,000,000 per hectare with unconstrained land use choices (Cheshire, Nathan & Overman, 2014).

Even in developed market economies, institutional constraints may thus prevent certain types of entrepreneurship from discovering more valuable uses of existing resources, while depressing observable market prices. In extreme cases, the depressed price can drop to as little as one thousandth of its free-market potential.

6. Final Remarks

There are many advantages associated with putting on one's spontaneous-order glasses when thinking about real-world economic phenomena. It is a dynamic framework that sees the market as a process rather than as a snapshot or an optimal end state. Because people are seen as they are rather than as instantaneous optimizers with access to all relevant data, the framework also directs our attention to agents of change, and in particular to profit-seeking entrepreneurs. Because the extent to which entrepreneurs can discover profit opportunities—and act on the basis of these discoveries—depends on the institutional structure in which they finds themselves, there is but a small step to use this framework to focus on the supportive or distortive effects of institutions in various localities.

I would like to end this *Edupaper* with a table (see Table I), which is an attempt to summarize the key differences between the spontaneous-order approach and the neoclassical mainstream in economics. The application of spontaneous-order theory to economic problems is for the most part the same as the so-called “Hayek-Kirzner research program” within Austrian economics¹.

Table I. The Spontaneous Order and Neoclassical Research Programs

Component	Research program	
	Spontaneous Order	Neoclassical
Hard-core Propositions		
Decision makers have perfect or probabilistic knowledge	No	Yes
Economic agents face structural uncertainty	Yes	No
Decision-makers are rational, however “rational” is defined within the program	Yes	Yes
Economic agents have the knowledge required for rational behavior	Yes	Yes
There is a strict tendency toward coordination of economic activities	Only if the system constraint is “tight”	Yes
Positive Heuristics		
Construct dynamic theories in which learning is a real-time irreversible process	Yes	No
Apply the principles of methodological individualism	Yes	Yes
Construct single-exit situational models	No	Yes
Translate the situation into a constrained optimization problem	No	Yes

Sources: Adapted from Harper (1996) and Andersson (2008).

¹ The term “research program” is used in the sense of Lakatos (1970).

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Notes

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As an academic and educational institution, CME aims to promote a more pluralistic and multidisciplinary approach to economics and to spread the knowledge of a sounder economics, grounded in the understanding of market forces.

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