

# A city is a spontaneous order but is it a Hayekian system?

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**Abstract:** Butos and McQuade (2023) propose what they term a “Hayekian System,” with the basic elements comprising a spontaneous order that they apply to various social systems—economic, scientific, governmental, and interventionist—and outline how each is organized to generate the self-sustaining and self-regulating characteristics of a spontaneous social order. They endeavor to improve upon F. A. Hayek’s treatment of spontaneous order by purging the concept of what they identify as normative elements. The focus of this paper is on whether their approach applies to and sheds light on the idea [or concept] of the city as a spontaneous order and locus of innovation, as developed by the urbanist Jane Jacobs.

**Keywords:** spontaneous order, Jane Jacobs, living city, Hayekian system.

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## A. INTRODUCTION

In *Hayekian Systems* William N. Butos and Thomas J. McQuade offer a detailed look into the “structure of social interaction” that underlies the concept of spontaneous order, today most closely associated with Friedrich A. Hayek. They present a framework containing what they consider to be the basic elements that constitute a spontaneous order and discuss how those elements are related to one another and to the environment outside the system. They call this a “Hayekian system,” which they apply to various social systems—economic, scientific, governmental, and interventionist<sup>1</sup>—to outline how each is so organized to generate a self-sustaining and self-regulating process, characteristic of a spontaneous social order.

The authors point out that Hayek’s discussion of coordination in markets, where it has been most successfully applied, doesn’t transition smoothly to other social orders, in particular to those where the price system is absent and profit and loss signals don’t guide decisions. Butos and McQuade endeavor to improve upon Hayek’s treatments of spontaneous order, as well as that of Michael Polanyi, by purging the concept of what they identify as normative elements that “add a complicating layer of normative claims to the analysis” (p. 20)<sup>2</sup> “leaving it open to misunderstanding and confusion” (p. 23). Their concern is with means, not ends.

Our criticism is not with that direction nor the policy positions that Hayek endorses; our concern

is that to secure his normative ends directly he cuts short the budding analysis of spontaneous orders (p. 22).

This they argue frees them to formulate the general concept of a Hayekian system without resorting to normative goals such as “commitment to truth” in the case of science (p. 20) or a commitment to “traditional liberal order” in the case of social theory (p. 23). In doing so, they draw on Hayek’s neurological studies of the sensory order of the human brain.

Having spent most of my career as an urbanist doing research that takes as its starting point the idea that a “living city”—i.e. a settlement capable of generating social, economic, and cultural innovations (Ikeda 2024)<sup>3</sup>—is a spontaneous order, it is natural for me to wonder how a such city might fit into Buto’s and McQuade’s framework. I will address this question, but my ultimate aim here is to find out what I can learn from Buto’s and McQuade’s approach.

## B. THE CITY IS A SPONTANEOUS ORDER

For reasons I explain in Ikeda (2024), the (living) city is a spontaneous order *par excellence*.

To begin with, I define a “spontaneous order” as it relates to social orders as

...a set of interpersonal relations that emerges unintentionally over time and is sufficiently stable and coherent to enable independent individuals to form and carry out their plans with a reasonable expectation of success (Ikeda 2024, p. 60).

I will try to explain why a city is a spontaneous order in this sense.

### B.1 A Jacobsian Approach

For present purposes I will adopt the perspective of the renowned urbanist Jane Jacobs on the economic nature and significance of cities for economic development.

First, I take as a starting point of Jacobs’s definition a city as “a settlement that consistently generates its economic growth from its own local economy” (Jacobs 1969, p. 262). This approach views a (living) city as essentially economic in nature.<sup>4</sup> In particular, Jacobs argues that a city generates its economic growth through innovation.<sup>5</sup> It is a society’s principal engine of economic development (“new work”), which takes place as a consequence of local experimentation. More on this in a moment.

Second, while she explicitly introduces markets and prices in her later works, they are largely absent or only implicit in her earlier writings. Profit-seeking, entrepreneurship, and property rights are necessary elements of her analysis, but she mostly takes them for granted. That is, while trade and markets are essential in her economic view of the city, she doesn’t develop a complete theory of markets. In the same way, Jacobs (1961) takes it for granted that people move to, interact in, and stay in a city to seek opportunity and improve their situation. And in her earlier work she doesn’t employ the price mechanism as a coordinating device à la Hayek. Instead, she relies on the idea that social networks are the primary means of conveying information within and across neighborhoods and districts in a city, and that enable safety and trust in public space among strangers to emerge spontaneously, which in turn makes possible a wide range of creative human interaction, cultural and economic. (As I have noted elsewhere (Ikeda 2024, p. 131), Jacobs should be credited as the first to use the concept of “social capital” in the modern sense of social networks and norms that facilitate the use of human capital.)

Third, Jacobs identifies four factors that together set the conditions from which can emerge a city that is safe, lively, and creative, although she is careful to point out these factors may be subject to change according to time and place. They are that the majority of its neighborhoods contain 1) diverse land uses (e.g. residential, commercial, industrial, recreational, educational, governmental) that attract outsiders, 2)

a sufficiently large number of people to economically sustain those land uses at different times of the day, 3) a system of navigable streets and pathways to make those local multiple uses readily accessible, and 4) enough low-cost working and living spaces to facilitate experimentation.<sup>6</sup>

Where these factors are present, they enable a large number of strangers to interact safely and to establish various formal and informal relations and contacts (e.g. commerce and community) that help to form different kinds of social networks, which in turn can help to transmit information smoothly to and from any of those networks. While Jacobs emphasizes the role these networks play in leveraging neighborhood concerns about municipal policies, they also facilitate innovation by making it easier for novel information from people who may be socially distant to enter a city and add to the diversity of knowledge and tastes, which can promote new discoveries, both cultural and economic, and valuable discoveries to be easily diffused to other localities.

The interaction among these four inter-dependent factors then creates a dynamically stable process of co-development, which manifests in changes in a city's complex division of labor, in ways that adjust to demand and supply without the need for central direction. The outcome of these processes is even greater land-use diversity and the generation of what Jacobs calls "effective pools of economic use" (i.e. heterogeneous land uses that represent potential production complementarities) on the supply side, and an ever-increasing diversity of consumption on the demand side.

In all of this, there is no central planner that guides how the formation of the four factors or co-development takes place. Although Jacobs doesn't reject urban planning for basic infrastructure and minimizing negative externalities, she strongly rejects the kind of urban planning as practiced, for example, by Robert Moses (Caro 1975) in mid-twentieth-century New York, precisely because it was an attempt to consciously shape the city according to his grand urban vision. At best, however, urban planning might perhaps create the conditions for the inhabitants of a city to best execute their own plans.

Beyond some point, a point typically exceeded in practice by most planning authorities, the designed complexity of urban planners ceases to complement the spontaneous ordering of urban dwellers and instead begins to substitute for it.<sup>7</sup> That is, there is a tradeoff between designed and spontaneous urban complexity. The result is a degree of social complexity far below, and a society less prosperous, than what would have otherwise been the case.

## B.2 Co-Development and Turning Diversity into Complementarity

Following Jacobs, I place equal importance on demand-side and supply-side diversity, both as constituting economic development, in the form of new and wider ranges of products and consumption, and as the motivating force of economic development, in the form of creators and adventurous consumers in a city.

On the demand side, cities attract and retain people seeking opportunities that aren't readily available in non-city environments. These individuals are diverse in the sense that the social distances (i.e. their backgrounds, knowledge, and beliefs) separating them tend to be relatively greater than would be found in, say, a suburban or rural setting. This means that their tastes also tend to be broader and their demand for lifestyle, food, jobs, entertainment, etc. broader too.

On the supply side, for reasons that I will explain shortly, the diversity of land-uses tends to be far greater in a city, again compared to non-city environments, which constitutes the effective pools of economic use—again, the local collections of diverse forms of material inputs and human capital—from which entrepreneurs can discover new combinations of inputs to create new products and services. Through trial-and-error and the filter of competition new products and production processes can emerge to meet changing demands for goods at all stages of production. Thus, for example, novel restaurants no matter how innovative will fail unless diners have a willingness to try diverse cuisine.

What is it that enables supply- and demand-side diversities to cohere and complement? As Butos and McQuade ask, outside the context of the market and the price mechanism how do you explain what motivates people to do what they do without recourse to norms of truth-seeking in the case of science or a com-

mitment to liberal principles in the case of political philosophy? Likewise, in the absence of a price mechanism, what enables people to coordinate their plans?

For Jacobs, as I have argued, social networks offer a path to an answer, at least in the case of cities. But the sociologist Ronald Burt adds a crucial element to this picture in his analysis of “structural holes” in social networks (Burt 1995). These are essentially unexploited personal connections that can increase the value of human capital and offer alert entrepreneurs the ability to spot profitable opportunities overlooked by others.<sup>8</sup> Burt adds to the picture of “buying low and selling high” the idea of “it’s not what you know but who you know.” That is, he introduces an explicitly economic dimension that doesn’t directly invoke market prices, which is useful to complete Jacobs’s idea of how social networks can generate economic development.

The nature of a city then is essentially economic because its evolution is largely driven by people seeking opportunities to improve their situations, as they see it, through trade and other forms of voluntary association, although of course it is much more than that.<sup>9</sup> It makes sense then to begin my investigation into whether a city is Hayekian system by seeing how well Buto and McQuade’s analysis of a Hayekian “economic system” fits that of a living city, regarded as a system. And so among the particular schemas Buto and McQuade present in their book, the one for the economy would seem to be the closest fit. The follow-up question is whether such a schema improves our understanding of the city.

### C. TO WHAT EXTENT IS A CITY A HAYEKIAN SYSTEM?

Buto and McQuade appear to offer at least two ways to characterize a Hayekian system that may be appropriate to address this question. One is depicted in the diagram in Figure 6.1 (p. 52), which illustrates “the process organization of a market system.” I will discuss this later.

In their chapter on Hayek’s *The Sensory Order*, Buto and McQuade lists several characteristics of a brain’s neural network and compares them to “brain-like aspects of social systems” (p. 33). Although the list is not necessarily a set of criteria for what constitutes a Hayekian system, and some of the items may not be appropriate to all social systems, I believe they make a reasonable place to begin.

#### C.1 Social Systems, Neural Networks, and Cities

Buto and McQuade name eight characteristics that neural networks have in common with a spontaneous social order. Interpreting them as criteria for a Hayekian system, I comment how each might or might not align with the spontaneous order of a living city. Paraphrasing, I list them as follows (pp. 33-34):

1. The systems have structural integrity while at the same time exhibiting a mutability in response to environmental experience. Example: The institutions of property and exchange in markets and publication and citation in science.

Whether a city has the kind of structural integrity mentioned here depends on what one chooses to focus on. Certainly the “built environment” of a city—i.e. its streets, buildings, and infra-structure—have high structural integrity but limited mutability. But what is meant here probably pertains more to social networks and social capital and the norms that support them. In that case, as I indicated in the previous section these crucial elements of a living city do indeed exhibit structural integrity and mutability.

2. One can observe an expansion of number [sic] of elements involved in pathways associated with a particular stimulus as that stimulus becomes more frequent or more pressing, and a concomitant reduction in numbers of elements associated with relatively less pressing stimuli. Example: Creative destruction in markets and paradigm shifts in science.

Jacobs's theory of economic development employs the concept of the division of labor, which as I have explained increases in complexity over time as the city containing it becomes more productive. The increasing complexity consists of parts of the division of labor that recede and possibly disappear as demand for the work associated with it decreases and as other areas expand in the form of new work created to meet local and foreign demands. In a living city, this new work outpaces the loss of old work.

3. The systems exhibit functional mutability. Example: The way the brain is able to develop work-arounds when certain neuronal paths are damaged.

I might use as examples of this the response of the locality to catastrophic events, such as the attack on the World Trade Center in 2000 or Hurricane Sandy that hit the New York City area in 2012 or the Covid-19 pandemic of 2020. In each of these cases, the City was able to recover economically relatively quickly, thanks in part to certain governmental responses, but mainly to the capacity of private individuals, organizations, and social networks to draw on their own resourcefulness to solve problems locally, enabling a systemic recovery. For example, in the case of the Pandemic, in the short run volunteers organized ways of getting food and other needed supplies to harried hospital workers and restaurant owners contracted many more workers to deliver food and later built outdoor sheds to accommodate worried diners.

For more chronic or systematic damage, for example poor urban planning (e.g. public housing) that resulted in increased displacement, poverty, and crime, New York City has had its better and worse years, but it remains economically strong. In 2022, the City alone generated \$1.2 trillion in gross output, equal to that of the state of Florida and twice that of Michigan.<sup>10</sup>

4. The systems exhibit anticipation. Example: Futures prices in markets and the predictive aspects of science.

I confess it's difficult for me to grasp what is meant by anticipation in the case of complex social orders. Merriam-Webster's dictionary defines "anticipation" as "a prior action that takes into account or forestalls a later action" or "the act of looking forward."<sup>11</sup> Anticipation strictly speaking thus appears to be a property of a conscious entity. By contrast, an ant colony only acts *as if* it anticipates some future condition, and an economy or science "anticipates" or "predicts" only in the sense that particular individuals—i.e. the buyers and sellers or research scientists—deliberately attempt to predict. It's merely a metaphor to say that the system anticipates since it's not the system *per se* that anticipates, but in both cases there is some mechanism that operates on individual anticipations and filters out the wrong ones and filters in the right ones. Financial futures markets reflect the combined effects of a multitude of buyers and sellers few of whom, perhaps none, will exactly anticipate the actual future price. So, a system only metaphorically "anticipates" in the sense that, as an unintended consequence of market competition or scientific testing, a better product (as judged by the customer) or theory (as judged against evidence) emerges from competition and testing.

Moreover, it's a metaphor that doesn't really seem necessary, since "adaptation," which the authors include as a separate element, seems to be sufficient to do the conceptual heavy lifting in the process. Adaptation itself is consistent with individuals' anticipation insofar as a system is more adaptable the more flexible the options currently open to the anticipating agents in it. Again, in a social system there is genuine anticipation, but it's by the agents within that system, operating through some filtering device that then help the system to adapt to changing circumstances.

Not surprisingly I don't think this point applies to a city any more than to any other complex social order.

But perhaps I can say this. At the level of government planning, if planners construct the amount and kinds of infrastructure that for a time suit the needs of future inhabitants of the city, then this may be an example of the authorities within the system anticipating. But it's an individual or the planning department

that is formulating a deliberate policy, e.g. road construction, rather than a system itself. At the level of the order that emerges within the framework designed by the planning authorities, it's more like a futures market, with different individuals testing out different bids and offers that may or may not prove successful. The issue then is more a matter of whether, say, developers build enough dwellings in the right place at the right price, or of there being the right singers and actors to properly stage a Broadway show and the kind of theater-goers who are willing to pay to see that show.

If that's what it means for a system to anticipate future conditions then I suppose a city does anticipate, metaphorically.

5. The systems exhibit reactions analogous to addiction. Example: To cash or credit with the ensuing hangover in the recovery process.

Merriam Webster's dictionary defines "addiction" as

a compulsive, chronic, physiological or psychological need for a habit-forming substance, behavior, or activity having harmful physical, psychological, or social effects and typically causing well-defined symptoms (such as anxiety, irritability, tremors, or nausea) upon withdrawal or abstinence.<sup>12</sup>

What would be analogous to addiction in this sense in the city; specifically, obsessive habits that result in a dangerous downward spiral? I can think of several possible examples. Let me start with the problem of what I call "urban interventionism" (Ikeda 2004).

In short, one characteristic of urban interventionism is the way a given policy intervention often produces problems that lead to and increases the demand for further policy interventions to address those problems, which can then result in further problems followed by more interventions, and so on. For example, rent regulation that keeps the rental price of dwellings well below market levels tend to generate chronic shortages of affordable housing. This lack of affordable housing in turn can lead to increased demand for housing subsidies, corruption among landlords, deteriorating apartments units and common spaces, and more. Each of these consequences in turn encourages some housing advocates to call for further interventions to address them. The bottom line is that this tends to create a host of government policies to attempt to address an ever-expanding array of housing problems, which can result in problems in other areas of the city such as homelessness, substance abuse, violent crime, and so on. Despite this the city as a whole may continue to work reasonably well for a while, again witness New York City, but certainly not as robustly as it might had other solutions been pursued initially: e.g. direct housing subsidies to low-income dwellers (not without its own problems, of course) instead of rent regulation or liberalizing zoning ordinances and other regulations to enable construction in areas where it is most needed (Ikeda and Hamilton 2015).

Jane Jacobs gives another example that isn't tied to public policy, which is the way some districts become so highly successful owing to their vibrant diversity of land use that it attracts more of mostly the same kinds of uses that have proven the most successful, driving up real-estate prices, which in turn makes it less likely that the kinds of diversity that were responsible for making the districts a success in the first place are now less likely to occur spontaneously. She calls this "the self-destruction of diversity" (Jacobs 1961, p. 241), a dynamics of decline that also seems to meet the above definition of addiction.

6. The classifications performed by these systems are relational, and what are being related in the final analysis are internal states of activation. Example: The way Austrian economists are attracted to phenomena that exhibit capital as a structure of production and lose interest in discussions in which capital structure is absent.



I confess I had trouble grasping what the authors mean here by the “relational” character of “internal states of activation.” Perhaps I’m misinterpreting their example? That is, if the concept of “capital structure” serves as an “attractor” for Austrian economists, I might ask if there are conceptual counterparts among urbanists that equally serve as attractors to or underminers of professional discussions? Well, the concept of “masterplan” comes to mind: If you question the practice of drawing up a masterplan to guide urban planning, you likely won’t be taken seriously among urban planners. How this might relate in particular to a city as a Hayekian system is hard to say because it would seem to apply to discussions of almost any kind on any subject, and not just among systems covered by the authors, such as economists, physicists, or policy-makers. This might be because point six (as well as the others) appears in Butois and McQuade’s discussion of the brain’s neural network, as discussed in Hayek’s *The Senor Order*, which may be relevant in that context but not in the specific question I’m addressing here.

However, another way to interpret this characteristic is to focus more on the relational nature of the way a Hayekian system classifies different states of activation.<sup>13</sup> In that sense, the relevant question is whether a living city somehow “classifies” and appropriately adjusts to events, and I believe the answer is that it might. One example might be the way it both attracts and adjusts to large influxes of strangers when the four generators of land-use diversity are present, in the manner discussed earlier. That is, for example, when sufficient numbers of people are incentivized to occupy public spaces during different times of the day (owing to multiple and diverse attractors that have emerged in a given location), their “eyes on the street” then act as informal monitors that create the fact of and the perception of safety. If that is consistent with “classification of an internal state of activation” then perhaps characteristic six does apply to a living city.

7. There are areas of interaction that are within the boundaries of the system but which are, by and large, confined to a local context and dedicated to specific tasks. Example: Production activities in firms within markets and research activities in labs within science.

What I mentioned earlier about how the factors that make for a dynamic and lively neighborhood—a variety of attractors, population density, intricacy of pathways, affordable space—interact in an unplanned manner to spontaneously generate pools of economic use is scalable. That is, the way these elements (i.e. mixed uses, etc.) encourages experimentation and innovation in a neighborhood is a similar process, though different in its elements, as the relations that emerge among trading cities. In Jacobs’s analysis, this involves local entrepreneurs finding ways to replace certain imports from other cities with locally produced products that may then be exported, which then increases export revenue for locals and allows them to import other novel products from other cities. In this way the city, considered as a unit of analysis, interacts with its “external” environment through trade. I will develop this idea in the section C.2.

8. How a system reacts to a particular stimulus depends not only on the stimulus but also on the current state of the system. Example: The way the effects of a minimum wage law may be obscured by relevant factors that are not held constant.

I might perhaps illustrate how this point applies to the city with the way landlords can often skirt regulatory caps on apartment rents by compromising along other margins such as upkeep of public areas to lower costs or insisting on large under-the-counter payments to offset the revenues lost by the cap. Or an example going in another direction could be the recent attempts at making housing more affordable by allowing homeowners in California and elsewhere to convert basements and backyards into rental housing. While this may sound promising to some on paper, the problem is that there are tons of other restrictions on housing construction such as minimum lot sizes, set-back rules, and parking regulations that often discourage homeowners from making such conversions.

## C.2 Economic Systems and Urban Processes

Next, I turn to Buto and McQuade's application of the Hayekian system approach in their chapter on economic systems to see if it can also be applied to the city, given the essentially economic nature of the living city. Their presentation contains what they see as the major elements of an economic system—production, exchange, innovation, judgment—and how these elements are related to one another—results, knowledge, proposals, plans—and also to the environment—“resources for system maintenance and feedback in reaction of output”—outside the economic system, proper.

Here is a rough sketch of the system, which appears in Figure 6.1 (p. 52) in that chapter, with “→” indicating the direction of flows:

- **Production:** Implementation of production plans  
→ Results of outcomes of production relative to plans, and information (including advertising) as to their desirability →
- **Exchange:** Transactions between buyers and sellers affected by preferences, expectations, and availabilities  
→ Knowledge: The price structure as a model of the market, its productions and their brand reputations, and its environment →
- **Innovation:** Development of ideas for new products and improvements to existing products  
→ Proposals: Entrepreneurial initiatives for future products, services, and production methods  
→
- **Judgment:** Assessment and selection of proposals for viability and financing  
→ Plans: Directives for production, including the creation and organization of firms →
- **Production...**and so on.

Moreover, the production output interacts with the external environment, which provides feedback to the system.

Despite the economic nature of cities, it's hard to see how a living city fits neatly into this schema. First, the system as depicted appears to emphasize the supply-side more than buyers' demand, which is included implicitly in “exchange” stage. This may be a concern from my perspective since, as I have argued, in the process of urban innovation the diversity of tastes of buyers (for inputs and outputs at all stages of production) is an essential complement to the diversity of supply. Second, cities possess a non-market dimension vital to urban market processes that is absent in this schema. This includes the rules, norms, and conventions (e.g. respect for honesty, trustworthiness, and fair play) that facilitate social interactions and engender social networks, without which economic processes cannot flourish. Third, also absent are urban institutions such as neighborhoods, districts, and the infrastructure, which as I explained in section III.1 are important elements for fostering experiment and innovation.

This isn't necessarily a criticism of the how the economic system is depicted in Figure 6.1, especially if I can find a way to modify the framework to fit my urban-based concept of the economic system.

For instance, it may be possible to modify this schema to include the elements that I mentioned in section C.1, and to show their relation to one another and to phenomena outside that system, such as trade with other cities if the city is the unit of analysis. There, inter-city trade is highly important because no city can develop through innovation without extensive exchanges with settlements of various kinds outside its local area, such as other innovative cities and supply regions. Here is my attempt.

I have elsewhere (Ikeda 2024, pp. 200-201) recapped Jacobs's theory of how cities innovate, a process that takes place here at a more macro- or city-level, as follows:

In summary, the stages of economic expansion are: (1) exporting local products and resources to buy imports, (2) using local pools of diversity [by the four generators of diversity] to entrepre-



neurially replace some imports with locally produced goods, thereby (3) increasing the extent and complexity of the DOL, generating additional income and more potential complementarities, (4) exporting more local production, (5) increasing imports and shifting to new kinds of imports, (6) so that in time, some of these imports are themselves [entrepreneurially] replaced, beginning the process anew (Ibid.).

Import replacing occurs when local producers find novel ways to replace particular imports with ones better suited to meet local demand, and represents entrepreneurship on the supply side, while import shifting takes place when local consumers spend revenue they earn from exports on novel goods produced in other cities and represents entrepreneurship on the demand side. Both imports on the part of buyers from, and exports on the part of sellers to, other (external) cities drive this process.

Note that just as we might study how people in a given city interact economically or culturally with those in other cities in the region or globally, we could treat a single neighborhood as the unit of analysis so that other neighborhoods and the city as a whole interact externally to it, which is the focus of Jacobs in her famous *The Death and Life of Great American Cities* (1961). What is internal or external to the system thus depends on the level of analysis—i.e. neighborhood, city district, city, city region, globally—with each level nested within the one above. Thus, at one level of analysis the city may be the spontaneous order of concern so that cities elsewhere (regionally or globally) would be regarded as external to it, as in the import-replacement/shifting processes, while at another level the neighborhood may be of primary concern, and emergent phenomena there the object of study, with the city as a whole being the external “environment” with which it interacts.

At any level, processes related to them evolve through time and may slow down or reverse themselves, for example, owing to policy blunders (e.g. trade restrictions or rigid zoning ordinances) or natural disasters (e.g. climate change or pandemics) or greater competition for products and human capital from more vigorous cities.<sup>14</sup>

So, if what I describe here fits into a schema modified from Figure 6.1 then I have perhaps shown that the living city may indeed be a Hayekian system.

Moreover, the Jacobsian analysis can be seen as an investigation into the positive question of what factors promote innovation and economic development, without assuming that this is a good thing. That is, one need not accept innovation and economic development as normative goals to accept Jacobs’s analysis, of course. For instance, some environmentalists and de-growth advocates strongly object to rapid economic development or any development at all.<sup>15</sup> Looking at Jacobs’s analysis purely from the perspective of positive theory, this aspect of her work appears consistent with Buto and McQuade’s non-normative approach to Hayekian systems.

## D. CONCLUDING THOUGHTS

I have long had a deep appreciation for the importance and usefulness of the concept of spontaneous order, and Buto and McQuade’s concept of Hayekian system hasn’t much changed that one way or the other. However, the framework they provide may have given me a different way to organize my thinking about Hayek’s concept of spontaneous order and a greater appreciation for the problems and complications of applying it outside the market context, as I’ve tried to do here.

I wonder why Buto and McQuade didn’t apply a Hayekian systems approach to law or language, since after markets these are two of the most common examples proffered of spontaneous order. Perhaps it’s because the evolutionary filtering process appears to be more clear-cut in these cases—i.e. the need to resolve disputes through an adversarial process in the case of law and in the case of language that differences in expression compete, as it were, with the need to communicate effectively—than it is in science or government. At the same time, Hayek has also been criticized for making the evolution of law and language appear more

cut-and-dried than they really are. In that case, it would be a useful exercise for Butos and McQuade to apply their approach to them.

In any case, it has been an interesting exercise to try to interpret a living city as a Hayekian system, in the sense that it has forced me to think more about how the various elements I utilize to study cities—e.g. generators of diversity, structural holes, the fractal nature of urban systems (i.e. neighborhoods, districts, cities, and regions), and inter-city trade—might relate to one another in a more systematic fashion. How useful this will be (and whether I’ve done this correctly) for my research remains to be seen. On the one hand, as I’ve said, my appreciation for the nature and significance of a spontaneous order hasn’t really changed, though perhaps that’s because I need to work harder to fully grasp the lesson. On the other hand, it might simply be the case that a living city is a spontaneous order yet not a Hayekian system, which would lead one to ask exactly why some spontaneous orders aren’t Hayekian systems, and vice versa. And that’s an interesting question.

## NOTES

- 1 Butos and McQuade devote a chapter to “government systems” and deal at length with government intervention in another chapter on “interactions with government.” At the risk of being self-serving, I might point out that I have written extensively with government systems or what I call “the governmental process” elsewhere but especially in Ikeda (1997). Indeed, that book is an extended and detailed analysis of the dynamics of the interventionist process, which authors reference without drawing materially from it.
- 2 All references to Butos and McQuade (2023) will appear here with page number, only.
- 3 For the purposes of this article, unless otherwise stated, “city” will refer to a living city in this sense.
- 4 In addition to Jane Jacobs, the noted urban planner, Alain Bertaud (2018), also stresses the economic nature of a city by characterizing it as a “labor market.”
- 5 See her brilliant description of such innovation, as well as spontaneous order (although she doesn’t name it as such), appears in Chapter 1 of Jacobs (1969).
- 6 For an extended explanation of these factors and how they work together to generate land-use diversity, see Jacobs (1961, pp. 143-221) and also Ikeda (2024, Chapter 4).
- 7 See Ikeda (2024) Chapter 3.
- 8 Burt (1995) extensively cites Israel M. Kirzner in his analysis of structural holes.
- 9 I have argued (Ikeda 2024) that the same urban process drives cultural change and changing social norms.
- 10 See data from the St. Louis Fed, <https://fred.stlouisfed.org/release?et=&pageID=2&rid=397&t=>
- 11 See <https://www.merriam-webster.com/dictionary/addiction>.
- 12 See <https://www.merriam-webster.com/dictionary/addiction>.
- 13 I thank Roger Koppl for suggesting this. The usual caveat applies, of course.
- 14 This is related to point 3 in section III.1 regarding “mutability” or resilience in the face of damage.
- 15 See for example the website <https://degrowth.info/degrowth>.

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