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“Markets read in tooth and claw”

Edited by

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Organism as a metaphor in German economic thought

MICHAEL HUTTER

Introduction

Why go back to those turbid Teutonic tomes written by the likes of Adam Müller, Friedrich List, Albert Schäffle, or Othmar Spann? The attraction has very contemporary explanations. The recent controversy about the relevance of physics to the development of economic theory has kindled a more general discussion on the role of metaphors. It is unclear whether metaphors are just a coincidental device, clearly distinct from the theory's internal structure, or whether they constrain and direct the theory for which they have been appropriated.

To shed some light on this question, it may be helpful to examine the role of biological processes as a source of inspiration for economists. They were, at times, even more popular than physical metaphors. Yet today, biological analogies to economic processes are widely considered a failure. Apparently, then, some metaphors are more successful than others. What caused the failure of biological images? Is it a feature within the biological paradigm, or is it a problem of transferring the basic structure of biological systems to the structure of economies?

This chapter surveys a subset of the biological approaches to economic theory, namely, those based on a comparison between biological "organisms" and economies as parts of social "organisms." Organic approaches were particularly popular in German thought, and this chapter will restrict itself to German texts. Until the 1930s, organic comparisons were widely considered a viable alternative to mechanistic interpretations of social and economic action. Since then, "organism" has been discredited as a social metaphor not only because of its apparent scientific sterility, but also (and this is the graver cause) because of its suspected contribution to national socialist ideology. Going

back to the turbid tomes, then, was not like approaching the wisdom of the ancients with a feeling of veneration. It was more like sifting through a rubbish heap, touching texts that had been declared not only useless but, worse, dangerous.

There is a further reason for picking up the old debate. Recent work in social theory has begun to model economies as well as organizations and institutions as self-referential, autonomous communication systems. The autonomy of such systems has been likened to the operational closure of biological bodies and single cells. The new social theories, however, are structured in a way that is clearly distinct from the older, organic theories. Exploring the difference may be a way of finding out under what conditions biological metaphors are appropriate for social and, more narrowly, for economic processes.

The use of the organic metaphor in German economic thought was woven into the more general intellectual discourse. In many cases, "organism" was used as a primitive notion, a term known and accepted by both writer and reader. Changes in the economic meaning of the metaphor took place along with changes in the intellectual context. The second section of this chapter outlines briefly the general history of the organism metaphor. In the third section, the history of the metaphor in German economic thought is reconstructed. The fourth section relates the findings to contemporary social systems theory.

Organism as a social metaphor: the context

"Organon" meant "tool" in ancient Greek parlance. Aristotle was the first to use it as a medical term, signifying a part of the body (1) that is structured, (2) that performs a function, and (3) whose existence depends on the existence of the entire body. Throughout the Middle Ages, the term was used in Latin and Greek texts in meanings similar or identical with "part of the body." The transfer from Latin to the modern languages, however, was slow and halting (Ballauff and Scheerer 1971, 1320). "Organismus" – as a term for an entity consisting of organs – was first used by G. E. Stahl (*Theoria medica vera*, 1708) instead of the then-current "corpus organicum" (Scheerer 1971, 1331). The term is a neologism, and Stahl introduced it explicitly in opposition to "mechanism," thus indicating an early challenge to the Cartesian paradigm. Half a century earlier, Descartes had, in one bold stroke, replaced the multiplicity of scholastic elements, substances, forms, qualities, and quantities with two distinctions: The distinction between *res cogitans* and *res extensa* differentiates the unobservable

world of thinking from the observable world of physical appearance; the distinction between *body* and *motion* is sufficient to explain all the phenomena in the physical world (Ballauff and Scheerer 1971, 1330; Specht 1966, 102–3). Living bodies are no exception to the paradigm. What used to be explained by a moving "soul" could now, at least to an astounding degree, be explained by the push and pull of physical forces.

The new theory did not yet know the limits of its applicability.¹ Stahl responded to the indiscriminate application of the mechanistic approach as it spread through Europe. But the limits of applicability remained vague throughout the eighteenth century. In consequence, those who used living bodies as economic metaphors, like Quesnay and Turgot, mingled their references to artificial contraptions, like clocks, and those to natural processes, like metabolism, because the distinction was simply not yet established.²

It was Kant who clearly defined "organism" through three criteria in his *Kritik der Urteilskraft*:

1. The idea of the whole determines form and connection of the parts.
2. The parts determine themselves mutually.
3. The organic whole reproduces itself in its totality.³

Note that the definition is very general and applicable to a wide variety of phenomena, natural as well as social. Indeed, it was by no means obvious in 1785 which of the emerging sciences would be able to use the newly coined term to the greatest advantage. Until the 1830s, organisms were the object of observation in natural science, in language philosophy, and in social philosophy.⁴ In all three fields, highly complex "bodies" with obvious, yet unintelligible structures invited the attempt of being interpreted as organisms.

The new science of *biology* had the most striking success in exploring such organisms. First, the old notion of organs was positioned more precisely between fibre and tissue on one side and the total organism on the other side. "Every organ," states J. C. Reil in 1795, "is independent and self-sufficient, it works for itself and through itself through the energy of its own forces" (quoted in Ballauff and Scheerer 1971, 1320).⁵ The conditions under which organs respond with specific reactions began to be observed carefully. The discovery of cells – already predicted in 1759 by K. E. Wolf (Scheerer 1971, 1331) but not accomplished until the 1830s – opened the door to a seemingly complete physiological explanation. The change of organisms over time was, after a long and winding discussion,⁶ determined as a process of varia-

tion, selection, and stabilization. Only after the breakthrough of evolutionism was the scientific connection between animal organism and human organism accepted (Mayr 1984, 281). The most recent step in the explanation of organic reproduction concerns the discovery of sequentially arranged amino acids serving as a code for the continuity of a genotype.⁷

The history of the metaphor in *language philosophy* is difficult to trace because that science had had no independent existence until then. In fact, it was literary expression, beginning for the German language with Herder and Goethe, that led to the awareness that we live within languages, that languages grow and die, that all experience is expressed in the same mode as fiction, like a novel or a romance – whence comes the name for the literary movement. Romantic philosophy and philology led, on the empirical plane, to intensive research into existing vocabularies, their changes, and their mutual relationships. On a methodological level, the harvest was much richer than the common prejudice about romantic yearning for a fictional past suggests. Still, the problem of observing the universe of discourse within one's own discourse proved intractable in logical terms. By the 1850s, descriptive historical methods prevailed, and organism was reduced to a vague generality. In the 1880s, particularly through Dilthey's proposal of a distinct methodology for the humanities, the issue of *Verstehen*, or Understanding, gained new interest,⁸ and that interest has been maintained throughout the work of authors like Georg Simmel, Ludwig Wittgenstein, Martin Heidegger, Hans-Georg Gadamer, and Gotthard Günther.

The history of the metaphor in *social science* was influenced by concurrent developments in general philosophy and by the successes of its biological application. The metaphor of the "social body" goes back to antiquity. The notion of a hierarchically structured "corpus" dominated the Middle Ages, Hobbes's *Leviathan* being just one example. As the notion of the individual emerged and grew during the sixteenth and seventeenth centuries (Luhmann 1986), the question of society's "elements" arose. Contractual, individualistic theories of social change gained credibility and acceptance. A countermovement was built on Kant's new general definition of organism. Fichte, for instance, observed in 1796 that the citizen sustains the state in the same way in which, "in an organic body, every part sustains the whole and is, in turn, sustained by it" (Scheerer 1971, 1340). Authors of the Romantic movement, like Baader and Schelling, assume the state as the natural form of social organization.

French and English authors took a more general view in describing

the forces that hold together and change societies. Comte, the first to propose a sociological system,⁹ explicitly referred to the organic nature of the entity whose composition he wanted to explore. He limited his observations, however, to those aspects of social action that produce the "spontaneous order of a society" by an equilibrating process and to those that change it through an evolutionary process; "adapting, as he tells us, the terminology of the zoologist H. de Blainville, he called the former Statics and the latter Dynamics" (Schumpeter 1954, 417). Herbert Spencer's emphasis on the differentiation of functions within societies, on society's self-regulation, and on its continuous evolution has been very productive for sociological research in the twentieth century (Parsons 1961). However, his belief in the simultaneous self-determination of the individual led him to a notion of individual evolution that has gained doubtful fame as social Darwinism (Mayr 1984, 307). It seems that the popularity of Spencer's work helped to spread the credibility of organic metaphors for social description. But since the elements of his theoretical analysis were rigidly individualistic, that credibility was not supported by an adequate research program. Organic sociology did continue outside of Germany, as in the work of René Worms (1926) but faltered, as well, in the 1930s.¹⁰

German sociology was strongly influenced by the interpretation that Hegel had given to Kant's ideas. Hegel outlined a new alternative to the old question of society's "purpose": Society does not strive for religious fulfillment; it is also not adequately described in terms of biological survival; rather, its purpose is the progress of a specific quality called *Geist*. *Geist* suggests the "will" or "mind" of conscious individuals, but it also suggests the collective nature of "spirit" as in team spirit. The most adequate translation, reflecting some of this ambiguity, seems to be "thought." Thought constitutes the specific quality of social organisms. Thought (or *Geist*) may take various institutional forms as it progresses through history, like state law or religion. Hegel's own preference for the status quo is of little relevance. His philosophy of history marks the beginning of German Idealism as a vigorous current of philosophical thought (Barth 1915). From then on, virtually all interpretations of society as an organism started from the explicit distinction between a biological organism and a thought organism (*Geistiger Organismus*). It is this orientation that sustained the application of the metaphor well into the twentieth century, long after the naive biological analogies had been discarded. Many of the major contributions to German philosophy and sociology had their roots in idealist tradition. There were, however, other attempts to interpret

society, particularly the state, in explicitly biological terms.¹¹ Hegelian *Geist* disappeared as a guiding term in the 1930s.¹² It was destroyed first by ideological misinterpretation, then by the physical eradication of German academic culture. After World War II, idealist and organic references are found only rarely in the philosophical or sociological debate.¹³ There were, however, successful advances in biology that led to more generally applicable results about the characteristic features of organisms. In particular, von Bertalanffy (1950, 1968) proposed a "general system theory" that interpreted organisms and social entities as open systems. We will return to these developments in the closing section.

Organism as an economic metaphor: the texts

Setting the criteria for exploration

Now on to the turbid tomes. From the preceding section it should be clear why there is no need to assume an organic school of economics in German thought to explain the continuing use of the metaphor. In the intellectual air from 1790 to 1940, cross-currents of conversation ran from biology to sociology and philology and vice versa. Moreover, organic metaphors were in widespread colloquial use. What are, then, the criteria for identifying those contributions to economic theory that not only used "organic" as a superficial synonym for "continuous" or "connected," but actually drew implications for their explanation of economic action and economic development? I have used four criteria:

1. Organic economic analysis is sociological in approach. The economy, therefore, is discussed as an integral part of society.
2. The observable form of the total social organism is discussed. Various candidates like state, nation, community, and *Volk* are conceivable, but one of them must be chosen.
3. The relationship between individual will and the purpose of the social organism is discussed.
4. Comparisons with specific anatomical and physiological characteristics of biological organisms are explored; new discoveries in biology are tested for their applicability to social phenomena.

These four criteria have been applied to the German economic literature since 1790. The result can be interpreted as the erratic, yet ongoing development of an organic paradigm well into the twentieth century. I have chosen to concentrate the exposition on the texts of ten

authors, published between 1806 and 1939. A few remarks and quotes are assembled to give a flavor of the argument in texts that do not share our contemporary theoretical bias. As a trade-off, all other work had to be relegated to notes.¹⁴ The choices were made with a view to highlighting changes in the organic paradigm, not with respect to the overall scientific value of a contribution. Before dealing with each text in particular, a brief outline of the sequence may be helpful.

Müller's *Elemente der Staatskunst* (1809) and List's *Nationale System der politischen Ökonomie* (1841) represent an early, theoretically simple organic approach. Roscher's *System der Volkswirtschaft* (1854) and Knies's *Politische Ökonomie vom Standpunkt der geschichtlichen Methode* (1853) are central works in the German historical tradition that demonstrate the strong dependence on organic thought. Von Lilienfeld's *Gedanken über die Sozialwissenschaft der Zukunft* (1873–81) and Schäffle's *Bau und Leben des socialen Körpers* mark the high point and the failure of a research program relying strongly on biological analogy. Menger's *Untersuchungen über die Methode der Sozialwissenschaften* (1883) contributes to the new individualistic, contractarian paradigm, but a large part of the text deals with an exact definition of the organic approach. Spann's *Fundament der Volkswirtschaftslehre* (1918) revives the Romantic movement; many of the biological connotations have been dropped, and the notion of a nation's purpose is prominent. Sombart's *Drei Nationalökonomien* (1930) distinguishes the relative explanatory power of social paradigms. The economic organism is transferred into a system of hierarchically composed meaning. Finally, Eucken's *Grundlagen der Nationalökonomie* (1939) contains a morphological theory of economic order that demonstrates how his thought, which became decisive in shaping Germany's postwar economy, had been shaped, in turn, by a paradigm that was, in essence, still organic.

Elemente der Staatskunst ([1809] 1922) and *Das Nationale System der politischen Ökonomie* (1941)

Adam Müller's *Elemente* (Elements of State Art) contains thirty-six lectures, given to educated, mostly aristocratic lay circles while the author lived in Dresden, trying to make a living as a free-lance writer.¹⁵ Being of common descent, Müller sided with the conservative political powers. His modest career reached a high point when he was appointed Austrian consul in Leipzig in 1816. The *Elemente* is colored by opposition to Smithian laissez-faire policies, but it is driven by a more ambitious desire to make sense of economic action within the context of national organic unity. The nation is patterned after

Fichte's "state": The encompassing community is the whole that determines the parts and is reproduced by them. The basic force is the "living force of the personal interrelation between all members of the community" (Spann 1928, 93). In order to exemplify the content of the *Elemente*, lecture 18, "On the Individual (Use-) Value, and on the Social (Exchange-) Value of Things," shall serve to illustrate the style and the theory of the text.

Müller opens with the argument that everything has a private character through use, and a civil (*bürgerlich*) or social (*gesellig*) character through exchange. Therefore, everything is private property and, at the same time, national property:

If a thing is called useful, then it is claimed that it has value in relation to civil society, that is, as should be sufficiently clear, that it receives a really personal character through the state, by which it serves the state just as we corporeal persons do. A useful thing is owned the way a person is owned: It is protected like a person, in spite of the rotten Roman Law, which cannot grasp this relationship and gives to the owner the right over life and death, while the police and the finance laws of the same state contradict this absolute right and have to cancel it in innumerable cases. (Müller [1809] 1922, 151–2)

The exchange value of things is expressed as money:

Money is an idea; or, if that word should be still offensive [twenty years after Kant] money is a property inherent in all individuals of civil society, through which they can connect themselves more or less with the other individuals, or disassociate connected individuals. (153)

As that "property of being money" is developed in fabrication and industry, national wealth increases:

The more every individual thing or person in the state connects itself with all others, the more it makes itself into money: The more concentrated and alive becomes the state, the more dexterous it moves, the greater are its emanations of force, the more it can produce. (155)

It follows that "products" can be understood only in their social context. National product is not the "sad, dead sum of all single private productions" within the span of a year; it must include "the time and the force of centuries" into its calculations (157). An example is the dependency of state credit on the change of factors in its environment:

This sum changes invisibly every second; no algorithm masters it; its rise and fall follows deeper laws. The real, not substitutable inner and outer national forces give the sum . . . being or not being; it is based on the most uncertain and the most certain that a man may give or pay, on his word, on a *national word*, and this national word is

based, in turn, on that on which every single thing really depends, as economic theory should show, on the *national force*. (158)

The lecture shows several typical features. A theory of productivity is developed that emphasizes, besides land, labor, and physical capital, a fourth factor: thought capital,¹⁶ including items that today are labeled human capital or social capital. Mainly the fourth factor drives the productive life force of the social organism, called, indiscriminately, state or society. Money, as well as property, is considered an "idea," which makes it possible to articulate social value. Money can be expressed through metal pieces, but it is more adequately interpreted as a word, that is, a promise of future national production.

It remains beyond question that Müller simply postulated the purpose of his social organism, first by identifying it with the political aims of state bureaucracy and landed gentry, later by identifying it with a religious authority. Yet the approach yielded a perspective with surprising connections to contemporary thought. It may be true that Müller introduced "a number of wholly inoperative metaphysical conceptions," as Schumpeter has charged (1954, 421). But it is doubtful whether the world of philosophic vision is as distinct from the world of economic analysis as Schumpeter believed.

Friedrich List wrote his *Nationale System* (National System of Political Economy) about thirty years after Müller's *Elemente* in 1838. The original version is French, since List had responded to the annual prize question of the Académie des Sciences Morales et Politiques in Paris. The question was: "If a nation wants to establish liberty of commerce or to change its tariff laws, which are the facts it ought to take into consideration in order to reconcile in the most equitable manner the interests of national producers and those of the mass of consumers?"

List had led an unsteady and perilous life for the cause of industrialization and liberal, yet national, trade. He had lost his chair in political economy, been jailed, emigrated to the United States, returned as U.S. consul to Leipzig, and worked as an activist and pamphleteer for the new railroad companies and other causes of industrial progress. List ran across the fateful prize question in 1837, after a management position at the Dresden–Leipzig railroad had been refused to him. The manuscript was, in his own words, written within a few weeks because of other pressing demands on his time (Salin and Sommer 1927, 32–3). The jury did not choose a winner of the contest. List was downcast, but still could be brought to edit a German edition in 1841. He killed himself a few years later in a state of failure and depression.

In spite of the differences in time and political conviction, the theo-

retical elements of the two texts are remarkably similar. List shares Müller's fundamental belief in the reality of a social organism called nation. List attributes a more independent role to the individual than does Müller, and he envisions the final attainment of a global republic in the future, but the social forms of his time are national entities. Like Müller, he attributes the growth of nations to productive forces. The *Nationale System* emphasizes the relevance of the legal order, of education, infrastructure, and institutions. It points out the interdependence of the various productive forces within a nation. Apparently, the postulate "the whole which is more than the sum of its parts" serves as an organic explanation for the productivity of the nation.¹⁷ List also advocated a differentiated position in tariff policy, eliminating tariffs within the nation (a major impediment to intra-German trade), and maintaining them in relation to other, more advanced nations. Here, of course, lies a considerable difference between the two authors: Müller orients his organic nation toward the past, romanticized as a medieval corporate community; List orients his nation toward the future, idealized as a technically developed nation. In support, he sketches a rudimentary step theory, leading from hunting societies all the way to the perfect economic state (*Der vollendete Wirtschaftsstaat*) – a goal reached, in his opinion, only by England and (almost) France. But despite these opposite interpretations of the arrow of time, both Müller and List operate from the same holistic position, based on the same "life forces." Müller, who sides with the conservatives, emphasizes the control and guidance by the state. List, who sides with the progressives, emphasizes the protection of infant-industry investment and the importance of long-range policy planning.

The *Nationale System* continued to be a source of inspiration for economic policy rather than economic theory. List, more than any other author of his age, was able to describe the particular historical development and contemporary state of the major national economies around the globe, descriptions that take up a good part of his text. Hildebrand even claimed that List had forced German economists to historical study (quoted in Spann 1928, 119). But the claim seems exaggerated since historical study was gaining in popularity in all the literary and social sciences during the 1840s.

Das System der Volkswirtschaft (1854) and Die Politische Ökonomie vom Standpunkt der geschichtlichen Methode (1853)

Wilhelm Roscher's *System der Volkswirtschaft* (System of the Folk-Economy) and Karl Knies's *Politische Ökonomie* (Political Economy

from the Perspective of the Historical Method) are the classical texts of the older historical school and have been described and analyzed many times.¹⁸ Here, they will be considered only with respect to their dependence on the organic paradigm.

That dependence is, in fact, considerable. Let us take, as a prime example, the term *Volkswirtschaft*. It was a standard term of the time, and it has remained so until today. The reality of a *Volk*, perceived as a community of thought, institutionalized in an organized state, seemed so self-evident that it was considered beyond the scrutiny of scientific inquiry. At this point, it seems worthwhile to remark on the difficulty in translating the term *Volk*. Both of the possible English equivalents, "people" and "folk," carry a strong individualist connotation. *Volk*, however, refers exclusively to the social phenomenon; there is no individualist interpretation. *Volk* is, at least since Hegel, considered an entity of thought, a culture. But it was easy, as we shall see, to reduce the term to a biological, that is, race-defined interpretation.

For both Roscher and Knies, the metaphysical unity of *Volkscharakter* and *Volkswirtschaft* is beyond question.¹⁹ New is the approach taken to analyze the performance of that collective organism: In both cases, individuals are endowed with various "drives." For Roscher, individuals have a selfish drive that guides their actions in private economic life and a community-oriented drive (*Gemeinsinn*) that guides them in public life. For Knies, the human soul is not to be fragmented, but still, self-love is complemented by a sense of justice, community, and the like. The postulated opposite drives, however, lead to a dilemma: Which one of the drives is decisive for a theory of production and a theory of value? Both assume that the selfish drive determines short-term productivity and exchange value, while the long-term development of a society and its economy is determined by the "life force" that drives that "organism of a higher order" (Knies). Here, the two authors part company. Roscher assumes a background from which everything emanates, "which may be called life force or species or god's thought" (quoted in Weber 1973, 19), but he pursues an empirical research program with the modest intention of "pushing back" that background. In order to do so, historical facts are collected as if they were natural phenomena – the species "*Volk*" is likened to the species "elephant" (Weber 1973, 11). Furthermore, the theoretical tenets of the classical theorists are applied to policy problems to an extent that has led Roscher's text to be judged simply as "historical sauce over a classical dish" (quoted in Winkel 1977, 93). Knies, in contrast, refuses any mechanistic regularity for the description of historical processes. To him, the *Völker* are, in turn, individual parts of

the larger organic unity of humanity. In the totality of human development, every *Volk* develops with a stable internal homogeneity, performing its individual historical role and function. Political economy (or *Volkswirtschaftslehre*), as a science, must concern itself with the laws of emergence. These laws, however, depend on the ability of individuals to act irrationally, yet in accordance with the life force of the social organism.

Note that Roscher and Knies already grant a more differentiated role to the individual than Müller and List did. Knies's insistence on the irrational individual was eventually transposed into a version compatible with the mechanistic paradigm by proposing the existence of "creative individual minds." Authors ranging from Spann to Schumpeter transferred the life force from collective thought (*Volksgeist*) to the minds of individual leaders (*geistige Führer*).

***Gedanken über die Sozialwissenschaft der Zukunft (1873–81)*
and *Bau und Leben des sozialen Körpers (1875–8)***

Paul von Lilienfeld's *Gedanken* (Thoughts on the Social Science of the Future) began to appear in 1873. Albert Schäffle's *Bau und Leben* (Anatomy and Life of the Social Body) had its first edition between 1875 and 1878, and sharply revised editions appeared in 1881 and 1896. We are now faced with a new generation of the organic paradigm. The successes of the natural sciences were well known by the 1870s, and they were a constant challenge to social science. Some social scientists, particularly economists, emulated explanatory patterns from the physical sciences. The concept of energy was borrowed from observation of the physical universe and was found highly useful in explaining phenomena like relative prices (Mirowski 1989). Other social scientists emulated biological patterns. They interpreted the concept of energy as a life force, but they constantly struggled with a more adequate formulation of the internal, reproducing force of social "systems," as they began to be called by von Lilienfeld and Schäffle.

As with all organic approaches, the new version was sociological in nature. But sociological in the 1870s did not mean the vague communities and superficial states of Müller and List; nor was sociology content with the collection of empirical details on human history. The work of Comte and his followers had given much finer structure and detail to the various sections of society. Could not the complexities of an industrializing society be compared to the anatomical structures and their morphology (as Haeckel had developed), to the flow of

organic forms in evolution (as Darwin had discovered), and to the new knowledge about social psychology (as Wundt had found)? The prospects must have seemed inviting to uncover the hidden similarities between the two types of systems, particularly if one believed that the Hegelian notion of thought evolution answered the question about the social organism's life force.

Both von Lilienfeld and Schäffle must be considered primarily as sociologists. They deal with the economy in the due course of their lengthy survey of the social body.²⁰ Von Lilienfeld's attention to the economy is slight. Schäffle, instead, had had early economic training and slowly expanded the scope of his research to the entire society. But the economy plays, in his system, an irreplaceable role for the anatomy and the physiology of the social body.

Although *Bau und Leben* found a certain amount of critical acclaim, it should be noted that both von Lilienfeld and Schäffle were on the periphery of established science. Von Lilienfeld, as a German-Russian, wrote his texts in virtual isolation; Schäffle, like List, began his career as a professor of *Nationalökonomie*, but after a stint as minister of commerce in Vienna and the publication of his antihistoricist work, he never held another chair and lived and worked as a free-lance scientist and social reformer.

The structural features of von Lilienfeld's *Gedanken* will be outlined briefly. He characterizes "organism" through five criteria: unity, suitability (*Zweckmäßigkeit*), ability of nonrepetitive movement, specialization of organs, and capital formation (*Capitalisierung*). The notion of capital formation is von Lilienfeld's primary claim to our attention. He transfers it from social observation to natural observation, just as division of labor had been transferred by others. Thus, he believes to have found a property common to all organisms. First, he defines everything produced by man that is not used for immediate (*unmittelbar*) consumption as capital. He then argues:

Every organism concentrates and accumulates its forces not only in his single parts. Endowed with organic unity, he must by necessity concentrate itself in itself . . . this tendency of forces to a common center, the ability to live and to develop its specific forms and boundaries represents a capital which is generated in every single organism and is transferred to following generations as life germ [the metaphor "germ" has been separated now from the older "life force"], as ability for a specific development . . . from this perspective, the whole organic nature represents in its totality incessantly growing capital, due to continuous accumulation, transformation and concentration of nature's forces. (von Lilienfeld 1873–81, 66–7)

Given his five criteria, von Lilienfeld proceeds to apply various natural laws of biology to the social organism. The first law is the discovery of cells as elementary particles of living bodies. Lilienfeld declares the nerve cells of human individuals – which are also, as he observes, the instruments of man's knowledge of the world – to be the cells of the social body. These cells are structured through individual nerve systems, but also through the intercellular substance (*soziale Interzellulärsubstanz*) of capital: buildings, railroads, books, money, law, ideas, and so on (see Barth 1915, 343). The social body, therefore, becomes visible through its capital structure.

Von Lilienfeld's approach makes parts of humans as well as goods into the elements of his social structure – an approach similar to the one chosen by Schäffle. For both, the consequence of that theoretical choice is confusion between a nonmaterial and a material interpretation of unity: The elaboration of the system oscillates between a normative orientation toward a transcendental ethical goal attributed to the social organism²¹ and an empirical-realist orientation that picks out biological observations and transfers them rather arbitrarily to social phenomena. The further features of von Lilienfeld's system are noted only summarily: Society is divided into physiological (economic), morphological (legal), and tectonic (political) spheres; social growth takes place according to the sequence of morphological forms suggested by Haeckel – as in natural evolution, forms are related in three dimensions, a temporal sequence (*nacheinander*), a spatial simultaneity of different stages (*nebeneinander*), and an ontogenetic repetition of phylogenetic development (*übereinander*); finally, anomalies of the social system, like pathologies of biological bodies, are considered treatable with therapies.

No doubt, *Gedanken* exaggerates the congruence between natural and social systems to a sometimes grotesque degree, and it provides little explanation for social change. But it unfolds the analogies with great consistency into a complex taxonomy, if not theory, of society.

Albert Schäffle's *Bau und Leben* was a much more successful text, measured by its popularity and the discussion it engendered. It shared, as already mentioned, some of the basic structural defects of von Lilienfeld's system and remained an elaborate, erudite taxonomy, filled and ornated with the biological knowledge of the age, even though it contains a number of remarkable theoretical insights (Borchardt 1961). Some of the main features of the text will be discussed.

Schäffle, from the outset, distinguishes the social body from the biological body:

At the top of the life phenomena in our earthly world of experience stands human society, the social body, composed in peoples (*Völker*) and their private and national institutions. Constructed of the substances and moved by the forces of anorganic and organic nature, it is yet a living body of a different (*eigener*) kind. The human or civil society, a much higher form than the societies of animal peoples, is a purely psychically [*geistig* is now translated as a psychologist's notion of the mind] caused indivisible life community of organic individuals, performed through symbols (*Ideenzeichen*) and technical actions (*Kunst-handlungen*). . . . The consciously performed, shall we say "ideal" coherence between connected organic individuals through symbolizing and technical actions – this is what constitutes the totally peculiar signature of the social body. (Schäffle 1881, 1:1)²²

Schäffle's *geistiger Organismus* is held together by means that are less material than von Lilienfeld's capital: He mentions voice, language, writing, and the technologies for communication, transport, production, and traffic that lead to a community of imagining, feeling, wanting, and acting (Schäffle 1881, 1:7). The various connections are distinguished into six varieties: unity through language, through common values, through order (law and morals), through power and coercion, through production, and through spatial continuity (accumulation). Only one of these connections is economic in nature. Schäffle likens it to the metabolism of natural organisms; economic institutions are likened to various forms of body tissue.

Schäffle's discussion of the economy touches all of the then-current topics of economic theory. First, there is a theory of value. Economic value is of central importance, it "reigns the production, circulation and consumption of goods. It is the compass of all economic motion" (quoted in Fabian-Sagal 1909, 67). Value is determined by human utility and by cost – "the double face of goods in the social metabolism" (82). Apart from the wording, the argument sounds rather Marshallian.²³ Second, there is a peculiar definition of goods. "If the economy is really society's metabolism, . . . all substances which enter it at a cost for a purpose of social maintenance must be considered economic goods" (Schäffle 1881, 2:206–7). In consequence, material objects and physical labor are goods as well as the so-called idea goods, those for "representing, communicating, conserving and continuing ideas." As society increases in complexity, the demand for idea goods increases exponentially. While material goods increase in cost because of their physical scarcity, idea goods can be produced cheaply and used repeatedly. Thus, their utility is "inexhaustibly continuing and regenerating, it is truly 'aere perennius'" (Schäffle 1881, 1:34).

It must be noted again that Schäffle, like von Lilienfeld, defines both individuals and goods as elements of the social organism, with shifting emphasis as to their relevance. To his contemporary economists, that seemed a daring step away from the production-oriented classical paradigm. But to contemporary idealist philosophers, it seemed a rather incoherent attachment to material connotations within a study of psychic, mental, or thought connections (see Barth 1915, 361–2). Schäffle also suggests a theory of the firm that follows liberal Smithian lines, even if the images differ:

We can . . . compare an enterprise to an independent body floating through the social universe; its path is determined by the attractive force of highest gain and the repulsive force of threatening losses . . . capitalism then is a composition of millions of individual labor and wealth entities into one national and international production organism under the guidance (*Oberleitung*) of enterprising capitalists who compete for the highest profit. (Quoted in Fabian-Sagal 1909, 164)²⁴

Beyond this perception of capitalism, Schäffle envisions a future development of society toward a harmonious state, which he calls “socialism.” He describes the features of his socialist utopia in great detail – with public production and the public calculation of labor and capital values through a “social clearinghouse” (Schäffle 1881, 3:335). But all of his details are derived from considerations external to the theory. The theory is unable to forecast anything because the driving force of the system can never be identified. When pressed to an explanation in the elaborate 500-page section on the “laws of social development,” a Spencerian world of the survival-of-the fittest individuals and collectivities is suggested, although with numerous details about the various stages and mechanisms of development. The present stage of that development is, to him, a state of individual liberty, regulated by contractual forms. The future state of harmonious socialism can be reached only if it is possible to maintain the private interests of labor and capital; otherwise “a necessary consequence is widespread laziness, disorder, and unemployment from below, pure arbitrariness and whim from above and anarchy on the whole” (Schäffle 1881, 3:345).

Bau und Leben was a sufficiently complex and rich text to leave its traces in the work of many contemporaries. Besides, Schäffle was a popular contender in the policy debates of his day and thus more influential than some of his academic colleagues. Schmoller integrated many of Schäffle’s concepts and ideas (Hutter 1992);²⁵ even Menger mentions the text favorably (1969, 170). One might argue,

however, that Schäffle’s contributions to economic theory are quite independent of his organic paradigm. That is inevitably true, since otherwise they would not have been preserved in a theory based on the individualist paradigm.

Untersuchungen über die Methode der Sozialwissenschaften
(1883)

Carl Menger’s *Untersuchungen* (Investigations on the Method of the Social Sciences)²⁶ is, of course, not part of the organic tradition. Quite to the contrary, it defends the “atomistic” paradigm against the dominating historical and organic paradigms. Thus, one of the three parts of the book is dedicated to the “organic understanding of social phenomena.” In distinguishing his own method from the organic tradition, Menger arrives at a clear restatement of the social metaphor, and he is able to clarify to what extent the notion of a common will is expendable in explaining the emergence of institutions. Two similarities between natural and social organisms are conceded: a certain analogy between the function of organs and the function of social constructs, and an analogy between the emergence of apparently highly suitable organs and the unreflected origin of useful institutions. To the degree in which such analogies hold, a social research program comparable to natural anatomy and physiology seems appropriate.

Menger proceeds to show the limits of such an approach in those cases where the analogy does not hold or where (pragmatic) reasons have led to the conscious choice of new conventions. There remains a large number of institutions that cannot be attributed to conscious action. How can they be explained without assuming a force called “common will”?

Menger’s answer, his celebrated theory of the emergence of institutions, is well known. Pure self-interest leads individuals to choose alternatives that are, as he calls it, the “resultant” of all individual interests (1969, 180). In a daring act of theoretical imperialism, he calls such institutions “organic.” Menger arrives at his solution by sticking closely to his atomistic assumption. There are no links of communication or thought, no symbolic or technical actions needed to explain social institutions. It is noteworthy that Menger chooses money as the empirical example to be discussed in at least stylized detail. In the case of money, the institution can be represented by a material commodity. No signs, symbols, or other forms of communication seem necessary for the explanation. Such an argument, however, seems much less plausible in the case of language, state, or law.²⁷

Menger's plea was to accept the exact atomistic method alongside the dominant methods. In time, he believed, more and more phenomena of the social world would become the object of his theory. The progress of the atomistic method, however, was much quicker. Within the time span of the next generation, the organic approach lost most of its scientific credibility. The paradigm lingered on in public usage and through the teachings of old-fashioned academics, but the wave of the future at the turn of the century was atomistic.²⁸

Fundament der Volkswirtschaftslehre (1918)

After World War I, the mechanistic paradigm prevailed in economic thought. Value, production, and capital theory were subject to a new dimension of formal rigor. Now, every economic text that attempted to build on the central notion of organic unity had to legitimize that position. Othmar Spann's *Fundament der Volkswirtschaftslehre* (Foundation of the Science of the Folk-Economy) combines an updated version of Hegelian idealism with a revival of romantic ideas and a moderate use of conventional classical theory. The biological connotations of organism play practically no role in the text. But it continues the economic metaphor on a more abstract, more specifically social level.

Society is, for Spann, a living world of thought, regenerating itself through its own internal force. The economy has a peculiar position within society because it has no independent purpose. It is a system of means that serves the fulfillment of the social purpose.²⁹ Therefore, the economy must be studied as an assemblage of functions (*Leistungen*) for the social purpose. Only then can one understand the economy's contribution to human spirituality (*menschliche Geistigkeit*). If one limits the investigation to quantities of goods, exchange ratios, and costs, one will only produce an objective and dead image of the economy. Spann's central concept is *Gegenseitigkeit*, to be translated as "reciprocity" or "interdependence." All the functions within an economy are interwoven; their performance depends on each other and cannot be analyzed separately. Thus, the "universalist" approach starts from the assumptions opposite to the "individualist" approach. Spann accepts the applicability of optimizing behavior for single economic actors; he even uses the principle of equality at the margin for allocative choices. Much of his terminology in these sections follows Menger, his predecessor in Vienna. But the activity of isolated units does not constitute organic unity. Spann identifies three reasons for a unification of the total economy:

1. Capital of higher order. That category includes virtually everything of a public nature that would influence economic activity: public goods provided by the state and the communities, contract law, and all other kinds of commercial law, building regulations, monetary order, and so on. Spann compares capital of higher order to the trunk of a tree, whereas normal capital is the branch, and the actual performance is the fruit (1929, 109).
2. Competition in the trading economy (*Verkehrswirtschaft*).³⁰ Competition integrates the individual desires into the composition of the economic structure, as it is given through capital of a higher order: "The selfish wish to have a villa at the sea only leads to 'economy' if the actions which it initiates fit themselves into a composed structure of means (*Gliederbau von Mitteln*) . . . through the objective requirements of the composed structure, the motivating reason must be reshaped into a reason for incorporation (*Eingliederungsgrund*)" (Spann 1929, 152). Through competition, the morphologically correct proportion of activities within the economic structure is achieved and constantly adjusted.
3. Aim orientation (*Zielverbundenheit*) of the economy. Aim orientation can be generated through the similarity of tastes and opinions in a region or a nation. Spann calls it *völkische Wirtschaft* and sees it organized either as a moderately capitalist or a corporate economy. Aim orientation can also be generated through collectivist centralized organization, but he considers that possibility to be utopian.

Spann goes into great detail to characterize the various stages of maturity that an economy passes on its way to community maturity (*Gemeinschaftsreife*). These details are of lesser interest in our context. It should be emphasized, however, that Spann does not pursue the approach to give *Geist* a more objective, science-based meaning through social psychology as Schäffle had tried to do. He returns to Romantic notions of an external, higher purpose. But in reintroducing them a century later, they become dangerous: By now, it has indeed become possible to force a purpose upon a society consciously. Sombart is probably right when he argues that Spann's theory is not even Hegelian, but basically scholastic: It aims not for progress toward an unknown future, but for the stability of a corporate world whose hierarchy of values is already known (Sombart 1930, 36–8). The complex mixture of traditionalist, reactionary elements and modern ingredients made Spann's

version of organic theory highly popular for the two decades between the wars.³¹

Die Drei Nationalökonomien (1930) and Die Grundlagen der Nationalökonomie (1939)

Werner Sombart's *Drei Nationalökonomien* (Three National Economies) and Walter Eucken's *Grundlagen der Nationalökonomie* (Foundations of the National Economy) do not use organism as an economic metaphor. If they mention the term, then it is in a condescending manner. Yet the influence of the organic paradigm can be shown rather easily in the two texts.

In Sombart's work, the economic organism has been replaced by the "economic system." An economic system is "a certain organisation of economic life within which a certain economic ideology (*Wirtschaftsgesinnung*) dominates and a certain technique is applied" (Sombart 1916, 22). In his first great research program, Sombart attempted to unfold in a "genetic-systematic" manner the emergence of the system of capitalism. In doing so, he wanted to fuse three perspectives or methods, the theoretical-abstract perspective, the realist-empirical perspective (the terms are taken from Menger), and the political perspective, which "orients all phenomena towards one ideal" (Sombart 1916, 22). The ideology or spirit characteristic for capitalism is defined as "a frame of mind (*Seelenstimmung*), woven out of entrepreneur spirit and citizen spirit into a unified whole" (329).³²

This approach is deepened and clarified in *Die Drei Nationalökonomien*. Sombart first describes a judgmental (*richtende*) theory with scholastic underpinnings – the Romantics and Spann fall into this category – and an ordering (*ordnende*) theory, which adapts the methods of the natural sciences. But he drives toward a third variety, namely, understanding (*verstehende*) theory. That theory is part of a larger sociology; it is a social and cultural science. Its fundamental objects are economic systems. The basic heuristic principles are the opposition of statics and dynamics (or development), the opposition of organism and mechanism (or folk economy and exchange economy), and the notion of value. At this point, the argument takes a new twist: Sombart introduces the hermeneutic problem of understanding in explicitly Heideggerian terms (Sombart 1930, 192). The observer is seen to be within his subject matter; he observes from the inside. The community, then, is a community of understanding. There can be no understanding without reference to a community (200). Sombart goes on to categorize three kinds of understanding. The understanding of

meaning (*Sinnverstehen*) relates to the basic ideas and categories of an economic system; the understanding of objective economy (*Sachverstehen*) relates to differing styles of production or distribution; the understanding of motivation (*Seelverstehen*) relates to the drives and purposes of single individuals. On the basis of these forms of understanding, economics can be reconstructed as one of the humanities (*Geisteswissenschaften*): "If we are a science like the exact natural sciences, then our research has only value in as much as it leads to practical use . . . in this case the theory of national economy would have no meaning. It can only maintain its meaning if we consider it as a *Geisteswissenschaft* which carries its value in itself" (342).

In Eucken's text, the metaphor of "organism" is replaced by "economic order" (*Wirtschaftsordnung*). Eucken states a failure of classical theoretical science to explain the variability of economic life. He also rejects the historical approach and Spann's universalist theory. He sets himself the task of solving the "great antinomy" between theoretical and historical approaches.³³

Older attempts to explain economic development like the historicist's "steps" or the "styles" (Spiethoff, Müller-Armack) and "systems" (Sombart) of contemporary authors are rejected because they assume some externally given sequence of development, whereas Eucken wants to be able to understand every stage of development "in its own existence" (Eucken 1944, 57, quoting Ranke). For this purpose, he suggests the notion of economic order: "The economic process takes place always and everywhere within a historically given economic order" (Eucken 1944, 61–2). Various parts of the economy have particular orders, "but all these particular orders fit into each other and are simply members (*Glieder*) of the total order" (63). Such orders can grow, or they can be introduced as constitutions. The scientist's difficulty consists in recognizing the entire structure of a concrete economic order in its complexity.

Economic orders can be broken down into their structural components with the aid of a matrix of market forms. The forms range from perfect competition to full monopoly, on both the supply and the demand sides. This "morphological apparatus" (Eucken 1944, 149) can now be applied to determine the characteristics of a particular historical economic order. Eucken suggests a basic distinction between centrally administered economies and trade economies, but still every order remains an individuality that "results from the selection of the realized pure forms whose number is limited and easy to survey (*übersehbar*)" (203). A derivation of dynamic theory must also recognize the distinction between process and order. Finally, the interdepen-

dence of all economic action demands a reintegration of business administration into economics and a circumspect execution of economic policy measures. "Every single policy measure influences the total order and the total process, and this total context, which should be the measure of economic policy decisions, can only be recognized by national economic science through the application of morphology and theory" (288).

Communication systems: a new chapter of the organism story?

A short introduction to contemporary systems theory

In economic thought, the organic paradigm has been considered a failure. It submerged when the mechanist paradigm proved more successful in explaining production, prices, and, to a tiny degree, growth. Only vestiges of it remain in the institutionalist tradition and in individualized versions of the Viennese tradition, like Hayek's "spontaneous order." But worse than being a failure, the paradigm played a considerable role in the emergence of an ideology in whose spirit tens of millions of people were killed and continents were devastated. If that metaphor were to be touched again, then it would have to be with a set of tools clearly identifying those features that have caused its previous failure and its disastrous misapplication.

There have been advances in philosophy, logic, biology, and sociology that possibly fulfill the requirements for continuing the organic approach: Systems theory and its continuation in cybernetics have yielded the concept of self-regulating open systems; language theory and formal logic have yielded new insights into the process of communication and understanding; biological research has advanced to a point where the self-reproduction of an organism's basic units can be precisely described. Out of these developments has emerged a theory of self-reproducing social systems that is able to treat societies and parts of societies, like economies, as organisms in the metaphoric sense in which Kant had defined them.³⁴ The new theory is explicit on all three of the Kantian criteria: interrelation of parts and elements, reproduction of the organism, and maintenance of the organism's "idea" or, more profanely, its border.

Interrelation of parts and elements. The issue of determining the social body's elements is never discussed explicitly in the organicist literature. It seemed perfectly obvious that natural individuals are the ele-

ments of the social entity. Yet we can trace difficulties with this assumption in all the texts. Roscher and Knies try hard to distinguish between "Gemeinsinn" and "Eigensinn." Lilienfeld suggests nerve cells as social elements; Schäffle adds material goods. For Sombart and Eucken, individuals are the dominating forces, and the unity of Sombart's system and Eucken's order are even harder to justify. There are attempts, then, to question the designation of humans as social elements. But the attempts are weak; the validity of the traditional assumption seems too obvious.

It is the apparent obviousness that obscures the fact that such a designation still is an act of choice on the part of the observer. The observer chooses the metaphor, and the observer must choose the equivalents between the two realms of meaning that are being compared. It is a choice with severe consequences. Once it has been made, any larger social entity must be thought of as a composite of separate individuals, held together by vague notions of a pragmatic nature: groups, teams, firms, communities. It is quite reasonable in this situation to stick to the individualist assumption and make the most of it, as Menger did in his penetrating analysis. Adding a "common will" or "communal sense"³⁵ simply turns the theory into a tautology.

In modern social systems theory, another choice is made. The elements of any social entity or "body" are assumed to be *communication events*. That choice seems indeed much more artificial than the traditional one, and it needs a little explanation: "Communication" refers to the most fundamental property of social processes. Meaning or information is transferred from one location of the system to another location. The transfer is not a physical transfer, because there is no matter involved. The transfer refers, rather, to the reappearance of the same feature in a later message. "Information," wrote Gregory Bateson (1972, 381), "is a difference which makes a difference in some later event." Since the term "information" has been preempted by Shannon and Weaver's (1949) technical interpretation, the term "communication" is suggested. Communication, then, notes the remarkable phenomenon that address A sends a message containing many differences; A observes that B reacts to the message by repeating some of the differences; A then continues the conversation by repeating some of the differences in B's message. Neither of the two will ever know how his counterpart has processed or "understood" the message. Nevertheless, the two addresses are able to continue their dialogue under the supposition that they understand each other. A communication event occurs whenever an action repeats the differences contained in a previous action.³⁶ Clearly, such events are tiny,

and they are highly volatile. Yet they are linked into endless chains of conversation and dialogue, using language, writing, music, and, last but not least, money as their medium.³⁷ Society can now be perceived as the total stream of communication, as it takes place in highly conditioned environments of skilled humans³⁸ and specialized machines.³⁹ We can – to return to our subject – define the economy as the totality of all messages that are performed using the communication medium of money. Thus, we gain a perspective of the economy that focuses on the communicative process rather than on material activities. Such a perspective is less novel than it may seem: There is a strong current in contemporary microeconomics that considers *transactions* to be the basic units of economic investigation.⁴⁰ The new social theory suggests that the communication aspect of a transaction, that is, the payment of money, is more relevant in defining an economy than is the material aspect, that is, the exchange of goods.

Reproduction of the organism. The older organic theories never come to a convincing explanation of social continuity and growth. If humans are chosen as elements, then it seems consistent to leave social reproduction up to them as well. But how? Surely, social reproduction must not be biological in nature. Whenever it is, the transfer of the metaphor has been left out, and we are left with a biological, race-oriented theory that dresses up as a social theory.⁴¹ Hegelian philosophy offers a solution: The social entity continues itself through “dialectical” movement. One idea leads antithetically to the next one. Thus, the social continuity is transferred to a continuity of thoughts in individual minds. Unfortunately, such continuity is observable only in explicit messages. It seems quite possible to develop such a perspective into a communication perspective. But Hegelian idealism is firmly based on the primacy of identity. To start with difference as a basic notion implies no less than a reconstruction of the entire edifice. There were also other attempts to position social reproduction. Schäffle, for instance, assigns the role to education. Again, the proposal sounds compatible to a communication perspective. But as always with Schäffle, the thought remains isolated; it is not developed into meaningful propositions.

The new social theory has a different option for expressing social reproduction: Communication events are linked by “copying” differences out of previous events. In fact, they would not exist if there were no previous events to refer to and if there was not an expectation of future events that will, in turn, refer to them. The process of copying can be observed quite well in chains of payment: A money sign, for

instance, a coin, is passed from one person to another. Person A offers that particular sign for economic value; person B accepts it. Next, person B offers the coin to a third person, who, in turn, accepts it. The coin has now been used in two subsequent transactions. The coin in B’s hand has rendered service twice: first, as a medium for the response to A; second, as a medium for the offer to C.⁴² The message has *duplicated* itself by appearing in two events.

Thus, we are able to define a process of reproduction in purely social terms.⁴³ Is the process akin to the duplication of genetic matter in biological phenotypes? Its semantic genesis would suggest that it is. After all, “code” is a social metaphor for a natural process. But more than that, we can observe that the duplication of messages contains mistakes and misrepresentations that have the same effects as variations and mutations of genetic matter. Social reproduction can then be thought of as an evolutionary process, without having to refer to external innovation as a driving force of change.⁴⁴

Border maintenance. The identity or “idea” of the social organism was of a higher, religious nature for Müller and for Lilienfeld. It was technically defined for List and vaguely transcendental for Schäffle and Spann. In every case, the outlines of society were somehow known to the observer, as if such perception were as easy as the visual perception of animals and plants.

The new social theory treats the distinction between a social system and its environment as a serious and methodically complex problem. Social systems appear and disappear, they seem to be dormant for decades, and they can grow rapidly under favorable environmental circumstances. In what sense can we say, then, that the system has a notion of itself, of its own borders, of its own identity? It has been suggested that social systems reproduce themselves through their own elements – they are operationally closed. Just like plays, which have no other goal or purpose than the continuity of the play, the systems continue themselves. All the information about the borders of the play are contained in the moves – there cannot be, by definition, any outside information.⁴⁵ As a consequence, the system can only react to internal changes. Even the environment is observable only inasmuch as it has been translated into internal communication. We can easily verify that proposition with respect to the “money game” of the economy or the “truth game” of science. Metaphors are, in effect, an attempt to plant new differences into the ongoing conversation play of a discipline. If the metaphor is picked up and continued, then new aspects of the world can be talked about.

The sense of identity that social systems develop varies greatly from the team spirit of a rowing crew to the vague feeling of togetherness in a language community. But still, there seems to be an interest of the system to continue its own existence. That self-interest belongs to the same logical category as the self-interest of biological organisms. Yet it is clearly distinct from the material survival common to natural beings. It is, primarily, an interest in the continuity of the communication events that constitute the play.⁴⁶

Conclusion

The new social theory could only be sketched in the previous section. But even that attempt creates some distance to the older texts, and it allows us to clarify or even explain some aspects of the organicist tradition.

We have seen that the organic approach failed because of the assumption that natural individuals must be the elements of society. A methodologically correct use of the metaphor requires that biological details have their social equivalents. Unless an organic model starts from purely social elements (like communication events), it cannot transfer the metaphor adequately when it comes to reproduction and self-interest.

The sequence of texts presented in the preceding section is, in itself, an example for the development of a communication play. The texts were all messages in a larger conversation.⁴⁷ There was, as many contributions to this volume show, a much broader stream of scientific development in which organic and social metaphors crisscrossed frequently and fruitfully.⁴⁸ There was, as is to be expected, a particularly intensive interchange within the German-speaking literature. There was also a vivid exchange of ideas with the other European language areas. That larger stream of development demonstrates how difficult it is to change established communication patterns and to give new meaning to old concepts. The concept of "state," for instance, changed dramatically between 1806 and 1939, yet Müller and Eucken were each mired in their respective perceptions. The development also demonstrates how authors' intentions are often ignored by the conversation. Texts relate to previous texts, irrespective of the value judgments of the authors. An example is Marshall's emphasis on organization and the lack of notice that the texts interpreting and reformulating Marshall have taken.⁴⁹ Such divergence, however, is not arbitrary. The ability to pick up an argument and to reproduce it depends on the ease with which a convincing story can be told. As long as there were no adequate formulations

for a theory of organization (and they are still lacking), all attempts remained descriptions without internal consistency, and in consequence, they were left out when the bare bones of Marshallian theory became part of the economists' "oral tradition."

But this, of course, is not the end of the story. In fact, it may be a beginning. As the basic structure of a logic adequate for articulating social processes slowly emerges, we may soon be able to transfer more of the richness of biological knowledge to the observation of societies. Organism, as a metaphor for social systems, may have its most productive phase yet to come.

Notes

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1. "At the price of an obstinate metaphysical problem a cleaning of the world of substance from the admixtures of spirit is made plausible" (Jonas 1973, 83). Here, as in all the following texts, the translations are mine.
2. For an inquiry into the use of mechanistic and organic metaphors by Quesnay, see Rieter (1983, 1990) and Christensen, Chapter 10, this volume.
3. Quoted after Barth (1915, 101–3). Kant is also among the first authors to point out that the new term "organization" is used to advantage ("sehr schicklich") in describing administrative reforms of the state bureaucracy (Scheerer 1971, 1352). But he also, like Herder, speaks of animal bodies or of entire nature as being "organized."
4. The distinction into these three general fields follows Foucault (1966).
5. Note that, at the time, the use of the term "force" was not yet limited to mechanistic force. Reil establishes an alternative source for such a force that is more precise than a tautological reference to "vital" forces.
6. But note that the interior of cells, the so-called protoplasm, was considered to be the basic "life substance" until the 1930s. See Mayr (1984, 525).
7. It is remarkable that "genes" were initially suggested by Johansen in 1907 as "a kind of measurement unit," i.e., as a fictional device. See Mayr (1984, 590).
8. Dilthey, in turn, traces his theoretical roots to Schleiermacher, Scherer, and Schelling. See Rothacker (1930).
9. At about that time, the meaning of the term "system" changed from indicating a thought system to indicating an observable system.
10. The French strand of development did not distinguish organic and mechanistic organization quite as sharply as the German authors did. For a penetrating analysis see Schlanger (1971). Another attempt, now rarely remembered, is Whitehead's attempt at a vitalist-organic philosophy. He

- argued that the continuity of existence consists of a sequence of atomic events that forms a nexus because of the constructive inclusion of the past in every new present. See Jonas (1973, 149–50).
11. See, e.g., Oppenheimer (1900) and Hertwig (1922). A survey of that period in German sociology is compiled in Kruse (1990).
 12. For a survey of neoidealism in the Anglo-Saxon world, see Phillips (1970).
 13. For an exception, see Jonas (1973).
 14. This holds, with particular regret, also for the work of Karl Marx.
 15. At the same time, Müller edited the literary magazine *Phoebus*, together with H. von Kleist.
 16. Müller associates the four factors with the “elements” of femininity, masculinity, youth, and age. It is these scholastic inclinations that have contributed to ruining his reputation.
 17. Authors with similar approaches could be mentioned. For instance, F. Schmitenners’s *National-Ökonomie oder Wirtschaftslehre* (1839) also postulated that the organic combination of forces within the state lead to an increase in national product. See Priddat (1991).
 18. See Schumpeter (1954) and Winkel (1977).
 19. On Roscher and Knies, see Weber (1973, 11–16 and 142–5, respectively).
 20. The *Gedanken* fill five volumes; the first edition of *Bau und Leben* spanned four volumes.
 21. Schäffle shares the traditional idealist position – with an Aristotelian twist, according to Priddat (1990). Von Lilienfeld, however, has excluded spiritual activities from his definition. He attributes them to a separate, hierarchically superior organism that is of a religious nature. See Barth (1915, 344).
 22. See Foucault (1966) on the historical meaning of “signature.”
 23. Fabian-Sagal (1909) sees similarities with Cassel; Borchardt (1961), with Walras. But the connections seem a bit strained.
 24. An important incentive in this context are innovator rents. See Fabian-Saga (1909, 152).
 25. Schmoller, in spite of his prominence and power, had little influence on theory development. He integrated the concepts of other authors liberally into his work, and Schäffle is no exception. Schmoller’s contribution to economic policy or reform is another matter.
 26. A recent translation renames it *Problems of Economics and Sociology*.
 27. Menger attached an appendix that deals with the origin of law – one of the central fields for applying the organic paradigm. Here, he argues that people realize the necessity of constraints for fancy and for arbitrariness. Therefore, they form “convictions” about such constraints. Still, he maintains that there is “wisdom which is not understood” (*unverstandene Weisheit*) in institutions like the common law – a fact that should hinder unreflected intervention and reform (Menger 1969, 283).
 28. The notion of organism, however, does not disappear from Menger’s writings. There is a strong emphasis in his late unpublished work on

- perception and the “chemism” of feelings as explanatory factors of economic behavior. Organism, in its psychological interpretation, thus continues to influence economic results.
29. Note the analogous interest in the relationship between means and ends in the Robbins tradition. The difference lies, of course, in the assumption about who or what generates the ends.
 30. There exists an old distinction in German economic thought between *Verkehrswirtschaft*, which encompasses the profit-oriented activities of private actors, *Gemeinwirtschaft*, which includes communal activities of an economic nature, and *Widmungswirtschaft*, which entails philanthropic giving.
 31. It was not only Spann’s version of organic theory that prospered at the time. An example of a text that relates to Schäffle and explicitly opposes Spann is Weddigen’s *Organismusgedanke in der Wirtschaftstheorie* (1939). The author declares the classical law of first increasing, then decreasing returns as the central theorem of economic theory and argues: “The precondition for the validity of this claim – unrecognized until now – consists in a sufficient, independent (*selbsttätig*) ability of the economic formation (*Gebilde*) [a term used very frequently in the literature of the time] to adapt, reorganize and rearrange the factors of production. They have to substitute each other in a certain kind of self-regulation to make the best of the new situation created through the one-dimensional change of input . . . from here follows the organic essence (*Wesenheit*) of economic theory, arranged systematically around the purely theoretical law of productivity” (6).
 32. More intricate connections between Sombart and the Romantics are compiled in Betz (1991).
 33. It should be noted that Eucken’s father, Rudolf Eucken, was one of the protagonists of neoidealism. See Eucken (1915).
 34. The major contributions are by Luhmann (1984b, 1988). See also Baecker (1988) and Hutter (1990).
 35. A comparison with the notion of “common sense” as it was used in English philosophy seems instructive. Apparently, the German (Kantian) interpretation implies a visible community, whereas the English (Humean) interpretation implies a community of thought.
 36. Such actions that specialize in formulating differences through sound or signs are called messages. It may seem that the perception of messages depends on an observer, while the existence of human beings is given. But that would be a mistake: There is a long and continuing debate about what constitutes a human. A short while ago, Pygmies were excluded; today, the status of embryos is contested.
 37. The proximity to theories that start from discourse is quite clear. Most of the available texts are less clear, however, on the primacy of discourse over its participants. See Klamer, Chapter 2, this volume, and the introduction of communication issues in Moore, Chapter 20, this volume.
 38. Individuals do not disappear in communication systems theory, as it is often claimed. Rather, they are split into two kinds of appearances: First,

they appear in social systems inasmuch as they contribute to the ongoing communication – transmitting their thoughts in “symbolic actions,” to use Schäffle’s term. But only the communication acts are observed. Second, they appear as separate consciousness, which are, in themselves, autopoietic self-reproducing systems. But the reproduction of consciousness takes place outside of communication, and the communication takes place outside of consciousness. The neglect of that basic distinction has led the idealist movement into mistaking consciousness for communication. The distinction is logically necessary because systems are distinguished from their environment through the environment’s higher degree of complexity; for communication events, consciousness, and life forms constitute their environment, and they are inaccessibly complex. Communication can only respond to events that have been brought down to its level and form of complexity. The inaccessibility of consciousness for purposes of communication becomes painfully clear as one searches for access to one’s mind in order to write a conference paper.

39. “Society consists of communication, it consists only of communication, it consists of all communications. It reproduces communication through communication. Whatever happens as communication is thus operation and, at the same time, reproduction of society. Neither in the environment nor with the environment of society can there be communication. In consequence, the communication system society is a closed system. It is, however, only possible in an environment, thanks to psychic consciousness, thanks to organic life, thanks to physical materialization, thanks to the evolution of suns and atoms. Society registers this situation by establishing itself as an open system. It communicates about something – about topics which concern its environment or itself or the actually occurring communication. Thus, society is a closed and an open system at the same time, and communication is the form of the elementary operation which performs and reproduces this combination” (Luhmann 1984a, 311).
40. Limoges and Ménard, Chapter 13, this volume, relate to that position.
41. This critique holds for Spencer as well as for Spann.
42. The coin does not constitute the message. It serves as a medium that makes it possible to articulate a particular payment message.
43. Murphy, Chapter 19, this volume, claims that mechanism and organism cannot be distinguished sharply because both try to “explain structure as if it were deliberately designed for its function.” The notion of self-reproduction, as it is developed here, sets organic structure quite clearly apart from mechanic structure.
44. The Schumpeterian approach, to which I allude here, is one of the variations of the Vienna tradition. Following the explorations of Menger, Schumpeter places the vital force into the creativity of individuals. Such a move seems compatible with the neoclassical tradition, but it presumes abilities that go way beyond the utility field notions of Edgeworth and Hicks.
45. This is the reason why the organicist authors refer to higher authority. They, too, can only perceive those systems in which they are participating.

They recognize the plays because they recognize certain events as moves in a particular play. The term “play” is used here in the sense of improvised, possibly artistic action. Games with given rules and given aims leave little room for genuine play.

46. It must be noted that the self-referential nature of the processes observed makes the existence of a play a prerequisite to identifying a specific communication event. There is no objective outside definition. The exposition of the theory, as it is attempted here, suffers from the constraint of linearity while trying to model a circular process.
47. Care was taken to present the material (or, rather, the messages) as texts, rather than as something produced by an author.
48. See, particularly, White, Chapter 8, on Richard Jennings and Alborn, Chapter 7, on the Victorian money debate. Of course, Mirowski’s (1989) account of the development of the energy metaphor is another contribution showing the scope of the interaction.
49. Compare Limoges and Ménard, Chapter 13, and Schabas, Chapter 12, this volume.

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