

Portland State University

PDXScholar

Systems Science Faculty Publications and
Presentations

Systems Science

6-2012

Complexity Theory & Political Change: Talcott Parsons Occupies Wall Street

Martin Zwick

Portland State University, zwick@pdx.edu

Follow this and additional works at: https://pdxscholar.library.pdx.edu/sysc_fac



Part of the [Ethics and Political Philosophy Commons](#), and the [Politics and Social Change Commons](#)

Let us know how access to this document benefits you.

Citation Details

Zwick, M. (2014). "Complexity Theory and Political Change: Talcott Parsons Occupies Wall Street." In *Complexity and the Human Experience, Modeling Complexity in the Human and Social Sciences*, Paul A. Youngman & Mirsad Hadzikadic, editors, CRC Press, 2014, pp. 141-160.

This Conference Proceeding is brought to you for free and open access. It has been accepted for inclusion in Systems Science Faculty Publications and Presentations by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

Complexity Theory & Political Change: Talcott Parsons Occupies Wall Street

Martin Zwick

Systems Science Graduate Program, Portland State University, Portland OR 97207
zwick@pdx.edu, <http://www.pdx.edu/sysc/faculty-martin-zwick>

Dec. 26, 2011

Abstract

Complexity theory can assist our understanding of social systems and social phenomena. This paper illustrates this assertion by linking Talcott Parsons' model of societal structure to the Occupy Wall Street movement. Parsons' model is used to organize ideas about the underlying causes of the recession that currently afflicts the US. While being too abstract to depict the immediate factors that precipitated this crisis, the model is employed to articulate the argument that vulnerability to this type of event results from flaws in societal structure. This implies that such crises can be avoided only if, in Parsons' terms, structural change occurs in the relations between polity, economy, community, and culture. The Occupy movement has called attention to the need for such fundamental change.

Key words:

Talcott Parsons, Occupy Wall Street, complexity, systems theory, action, AGIL model, recession, structural change, tetradic structure, guardian vs. commercial ethics

1. Introduction

This paper revisits an early cybernetic and systems-theoretic model – today it might be called a complex systems model – proposed by the sociologist Talcott Parsons (1966, 1971), and argues that this model can help us understand some of the underlying causes of the major recession afflicting the US economy today. The recession, which followed a near total meltdown of the US financial system, has involved massive losses of jobs, homes, and savings. This paper does not focus on concrete and proximal causes of this crisis, i.e., on actions by home owners, mortgage providers, banks, investments firms, regulatory agencies, Congress, the President, etc., about which there is no shortage of accounts. Instead, it poses the question of why the US was vulnerable to such a crisis; more specifically, what factors in the US societal structure generated this vulnerability.

By approaching the current crisis abstractly, Parsons' model can also shed light on past crises whose concrete and proximal causes were different. The model can also illuminate societal problems of a completely different character. Finally, the model is useful not only to diagnose problems but also to offer solutions; specifically, it suggests that changes in societal structure might reduce vulnerability to such economic disasters.

Presented at Human Complexity 2012 (1st Annual Conference on Complexity and Human Experience: Modeling Complexity in the Humanities and Social Sciences), May 30 – June 1, 2012, University of North Carolina at Charlotte.

What the model says is this: (a) A modern society, as distinct from a pre-modern traditional society, is *differentiated* in that economy, polity, community, and culture are distinguishable from (but in interaction with) one another. (b) In general, differentiation of a whole can be flawed: different aspects of a system can be linked together too weakly or too strongly, or links can be of the wrong kind, or one component can unduly influence other components. (c) The current US political-economic crisis and similar crises in the past are arguably the result of flawed differentiation, i.e., relations between economy, polity, community, and culture are at least partially dysfunctional. This may be the underlying cause of many (but not all) of the crises endemic to Western societies. These crises are systemic, and avoiding them requires structural change.

The discussion that follows is liberal in orientation, but Parsons' model itself is politically neutral, so it is conceivable that, using the same model, another theorist having a different political orientation might arrive at different conclusions. Indeed, this model was once characterized as being inherently conservative, because it allegedly assumed the stability and functionality of societal structures. This characterization is incorrect, since Parsons' structural functionalism can actually be used to explain either stability or instability and either functionality or conflict.

Section 2 describes Parsons' model. Section 3 then discusses the flaws that may be said to characterize the societal structure of the US as depicted by this model. Section 4 considers some proposals for political change that might rectify some of these flaws. The proposals come from the *99 Percent Declaration* of the Occupy Wall Street (2011) movement. This declaration is not an official set of demands – the movement has been reluctant to put forward such demands – but rather the output of a working group. But regardless of its lack of official status, the document is of interest here because some of its demands address some of the structural flaws that, according to Section 3, exist in the US societal system. The structural changes called for in these demands are not original to the OWS movement, but they have not been prominent in recent political debate, so their sudden appearance, as it were, in a document produced by a new popular movement is intriguing.

Both the flaws of differentiation whose existence is asserted by Section 3 and the proposed corrective measures discussed in Section 4 can be – and have been – discussed without any reference to Parsons' model. The point of this paper is to suggest that this model offers a coherent framework for talking both about problems connected with the current recession and possible solutions. By expressing them in the language of Parsons' model, these problems are seen to be the result of an underlying structure, as opposed to being simply historically contingent. Similarly, from the perspective of this model, many proposed solutions to these problems derive from the need for structural change, and are not merely ad hoc remedies. Indeed, several demands in the OWS *Declaration* aim precisely at those structural changes called for by the Parsonian analysis.

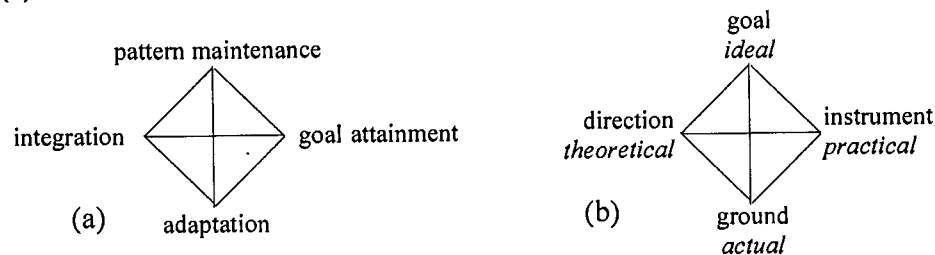
2. Parsons' model of societal systems

Talcott Parsons' (1966, 1971) "action system" is a theoretical framework for modeling societal phenomena. While the model is an old one, it would be wrong to think that early work in systems theory/complexity is necessarily less relevant to contemporary social issues than more recent work. As noted above, the model does not assume harmony between the differentiated components of societal systems; this paper, in fact, uses it to focus on disharmonies. These disharmonies can cause change, or, as in the current US societal structure, they can be locked in, yielding a suboptimal state. Positioning structure not only allows one to explain function and account for stability; it also allows one to explain dysfunction and account for change, or the absence of change. As a descriptive explanation of dysfunction – and the current economic situation is surely dysfunctional – it also has normative implications.

"Action," taken as a general concept, is said by Parsons to exhibit the tetradic structure shown in Figure 1(a). With some minor modifications of Parsons' ideas, this structure can be considered to be a special case of Bennett's (1961) tetradic system of purposeful action shown in Figure 1(b). Parsons and Bennett use the word "goal" in different ways: Parsons uses the word, which labels the "east" component of Figure 1(a), to mean a specific (tactical) purpose; Bennett uses the word, which labels the "north" component of Figure 1(b), to mean a more general (strategic) objective.

Figure 1. Parsons' action system

(a) Parsons' action system (b) Bennett's similar system



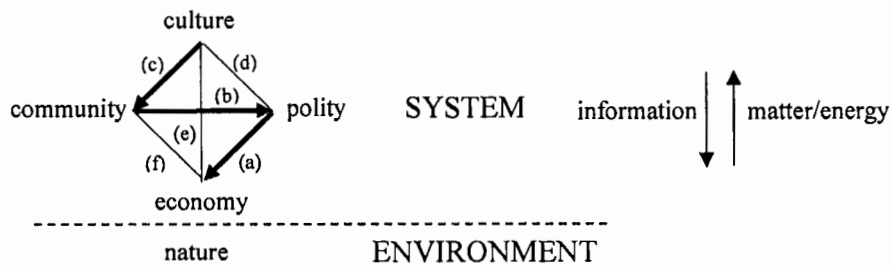
In Parsons' model, action aims at the general goal of pattern maintenance. It does so using basic processes of adaptation, the ground of action, which relate the system to its environment. These processes are used to attain specific goals by an instrument of action, which is given direction by a component promoting integration. This tetradic scheme is known as Parsons' AGIL model: A for adaptation, G for (specific) goal attainment, I for integration, and L for the maintenance of latent patterns.

Applied to societal systems, this scheme yields Figure 2. The economy is the ground of societal action; it provides the material processes needed to adapt to internal and external conditions. The polity (political order) is society's instrument for attaining specific goals. The community (relations based on kinship, ethnicity, language, location, interests, etc.; this component is often analyzed with a focus on race, class, and gender) is the integrating component of the societal system and provides the direction for the polity as instrument. (Parsons' actual phrase, "societal community," is shortened here to "community.") Culture (religion, science, the media, literature and arts) constitutes the patterns of knowledge and values that organize and are maintained by societal action.

Figure 2 includes also the environment whose link to the economy is not shown; it includes other societal systems, also not shown. Economy, polity, community, and culture are the subjects, respectively, of the social science disciplines of economics, political science, sociology, and anthropology (if the last of these is defined as being centered in the study of culture).

Figure 2. Parsons' action tetrad, applied to societal systems

The arrows in (c), (b), and (a) label the downwards information flow.



Using ideas from cybernetics and systems theory, Parsons orders the four components of the system hierarchically, indicated by the zigzag sequence of directed links shown in bold in the figure. The top component (culture) is information-like; the bottom component (economy) is matter-energy-like. (The economy has informational as well as matter-energy aspects – more on this later – but relative to the other components its matter-energy character is salient.) Informational regulation occurs downwards following the zigzag sequence of links: (a) polity regulates economy, (b) community directs polity, and (c) culture guides community. There is an upwards flow as well; the lower levels provide matter-energy support for the higher ones. In Marxist terms, the economy is, roughly speaking, the base while the other components are the superstructure. The Marxist claim of determination from below is not wrong, just incomplete: there is determination both from above and from below. In fact, the upwards flow of energy has its ultimate source not in the economy, but in nature. The flux of matter-energy through a societal system organizes it (Adams 1975), the flux providing the negentropic basis for its physical infrastructure. In this dual flow, this scheme accommodates both materialist and idealist views: materialist views are reflected in the upwards flows; idealist views are reflected in the downwards flows. This is still only a partial representation of interactions in the structure. There are upwards information flows as well, e.g., community generates culture, and other non-hierarchical interactions.

Intra-component interactions (not shown in the diagram) are stronger in the lower components of economy and polity than in the higher components of community and culture. One can thus simplify the tetrad into the dyad of economy-polity vs. community-culture as was done by Habermas (1984), who speaks of “the system” – economy plus polity – as opposed to the “lifeworld” – community plus culture. Habermas argues that because of the strength of economic and political forces, the outwardly-oriented system “colonizes” the inwardly-oriented lifeworld. However, this aggregation oversimplifies the tensions that can exist within the tetrad, ignoring the important tension between polity and economy which is central to the subject under discussion.

The upwards and downward flows do not exhaust the connections between the components. The four components are interconnected in other ways, and the set of dyadic links are labeled (a) through (f) in the Figure 2. The links have multiple meanings, but just to illustrate, “modernity” in Western societies means, for example, that

- (a) the economy is partially autonomous and partially controlled by the polity;
- (b) civil society determines and participates in the political order;
- (c) cultural values guide but do not legally constrain private activity;
- (d) church is separated from state (though religious values influence community);
- (e) culture is independent of, yet supported by, commercial life.
- (f) interpersonal relations are not dominated by those of economic exchange;

The doctrine that ‘modernization is differentiation’ means that differentiation increases in modernity, not that differentiation is total. In the terminology of Herbert Simon (1962), the system is only “partially decomposable,” since components are constrained by their links with other components and are thus only partially autonomous. In modern societal systems, differentiation is balanced by integration. The economy and the polity need to be connected, since economies are not adequately self-regulating and do not necessarily produce results in accord with societal values. The polity and community need to be linked according to principles of democracy and civic responsibility. The community needs to be guided by coherent sets of values. Other links are also important.

The simplest links are dyadic, and this paper will focus on these, but links can involve more than two components (Zwick 2001). For example, there might be a triadic interaction between polity, community, and culture that cannot be decomposed into dyadic relations. There can be interactions that are not separable at all into simpler ones. For a system with only four components, a four-way interaction that cannot be fully decomposed can be called “holistic.” Archaic societies were more holistic than modern societies; their economy, polity, community, and culture components were more tightly integrated and less easily distinguishable. With modernity, these components became more autonomous and distinct, but differentiation is still limited. It is impossible to conceive of a society where these components are completely independent, although some still fantasize the possibility of a completely autonomous market.

Structural analysis goes beyond considering possible links between components. Each component has sub-components and thus also an *inner* structure. Parsons conceived of the AGIL system as having fractal self-similarity, so each component can itself be decomposed into A, G, I, and L parts. Community, for example, which is the I component of the societal system, has four sub-components; its polity-like sub-component, i.e., the G in I, is “citizenship,” with its opportunities and obligations.

This fractal conception is theoretically elegant, but a more natural decomposition of the US polity, for example, is the separation of powers among the executive, legislative, and judicial sub-components. This triadic differentiation of the polity was an explicit concern of the founding fathers, and the institutionalization of separation of powers is an example of a specific and conscious – and partially successful – solution to a problem of

differentiation: The polity is also decomposed hierarchically and spatially, and the framers of the constitution also grappled explicitly with this different challenge of differentiation, namely the issue of federal vs. states rights and powers.

Similarly, while the economy might be decomposed into AGIL sub-components, a more natural decomposition might be based on the distinction between information and the matter-energy aspects of the economy. The financial and knowledge sectors of the economy are informational, while production and distribution of material goods and energy is obviously matter-energy-like. Service industries may resemble either of these or be intermediate in character.

3. Flaws of differentiation

As already noted, the functionalism of Parsons' model does not imply a natural harmony between its components, which can be mismatched or improperly related. This is arguably the case for US society. The model posits a downwards flow of information, i.e., regulatory control, from culture to community to polity to economy, and the most critical segment of this pathway is the last link: the control of the economy by the polity. In the US today, the direction of control in the last link is substantially the opposite: the economy, i.e., the large corporations and powerful special interests, largely controls the polity. This is accomplished by lobbying, by benefits provided to officials, by campaign contributions, and by the revolving door through which individuals move from public service to private employment that capitalizes on contacts and knowledge gained while in public service. The failure of the polity to prevent the current recession and deal with it effectively after its onset is partially due to this reversal of direction of influence.

Faulty differentiation is not merely a matter of direction of control. Loss of control of the economy by the polity allowed behavior in the financial sector that precipitated the recession and the danger of system-wide collapse that was barely averted. Regulation of the financial sector having been dismantled, banks and investment firms indulged in risky behavior. While the financial crisis led to temporary restoration of government influence on these firms and to the recognition of the systemic dangers of unregulated financial activity, it is doubtful that the proper lessons from this crisis have been learned, as adequate oversight of this sector has arguably not been instituted.

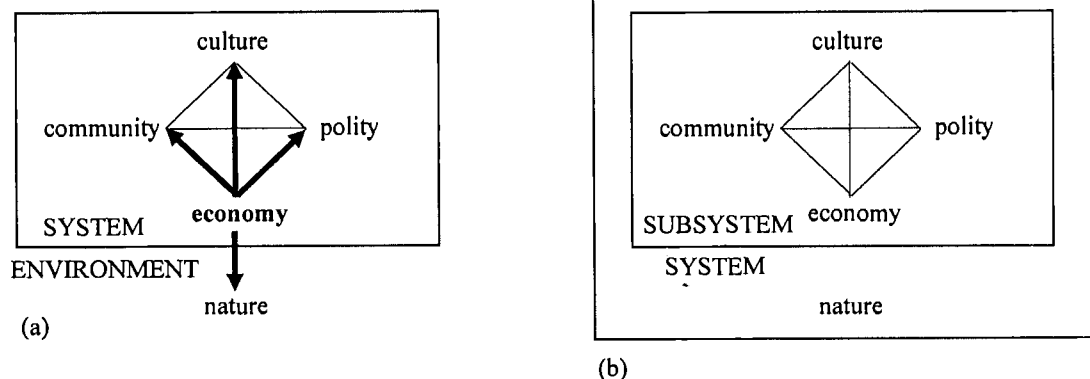
As mentioned above, one way that the economy exercises its control over the polity is via campaign contributions. The Supreme Court in the Citizens United case decided that corporate contributions are protected free speech. This stems in part from the legal status as "persons" that corporations now enjoy; for example, in their use of money to influence the political process. From the perspective of Parsons' model, this legal status is anomalous and exemplifies another structural flaw: personhood naturally applies to (individuals in) the community, not to (private organizations in) the economy. The right of free speech is critical to the community-polity link, which is the basis of democracy. Conferring upon corporations a right to "free speech" usurps and dilutes a right that legitimately belongs to a different component of the structure. "One person, one vote" reflects proper community→polity control; "one dollar, one vote" reflects the distortion of economy→polity dominance.

In any differentiated structure involving active agents, different components vie for influence on the whole. Where there are multiple components, there cannot be a single organizing principle that governs the system, but necessarily two or more principles that conflict with one another. Contradiction – or tension – is thus built inherently into the system. US society is often described as an example of “democratic capitalism.” This does not have to be an oxymoron: democracy refers to the community-polity link, and capitalism refers to the economy component. These two organizing principles might be harmoniously related or they might be at odds, but if they are at odds, as is often the case, one must have priority. In Parsons’ model, informational regulation flows downwards from community to polity to economy, so in principle, democracy, not capitalism, has priority. But the actuality in the current US system is largely the reverse of this.

In von Bertalanffy’s (1979) terminology, a “leading part” of a network is a component that has a dominant influence on other components. Because causality in a network is invariably mutual, i.e., circular, one cannot make simple distinctions between causes and effects, so the notion of a leading part plays a role similar to that of a primary cause. In the US system, the economy is the leading part, as shown in Figure 3(a). It dominates not only the polity but also community, culture, and nature. This resembles the Marxist view of the economy as a base that determines the rest of society as a superstructure, but from a systems – and Parsonian – perspective, this structure is not preordained for the differentiation that comes with modernity. It is a distortion, and one that can be corrected without replacing the economy by the polity as a leading part.

Figure 3. Economy as leading part – or subsystem of a subsystem

Arrows indicate directions of control.



Consider the economy-community link. While economic theory recognizes that economies function well only when negative externalities are internalized by decision-making agents, few mechanisms exist in a weakened polity that force externalities to be internalized. In the current recession, irresponsible but in most cases legal acts by many corporations resulted in enormous harm to the community, yet the community cannot extract compensation for this harm from those who caused it. There are also longer-term externalities affecting the community that manifest in the large and growing income inequality between the great majority and a privileged minority; to use the simplifying and expressive terminology of the Occupy movement, between the 99% and the 1%.

In the current recession, the government bailed out offending firms but gave the community only minimal help via stimulus programs and unemployment benefits. The bail-out was justified on the grounds that certain firms were judged “too big to fail.” But the restoration of some regulatory powers and the assumption of new powers to prevent system-wide collapse are unlikely to remedy the dangers that inhere in such bigness. The corrective measures taken so far will not insulate regulatory agencies from capture or prevent recurrence of crisis triggering bubbles. Already, firms too big to fail have become still bigger.

So far the analysis has focused on links *between* the four components of Parsons’ model. Tensions and distortions can exist also *within* these components. For example, the differentiation of the polity into executive, legislative, and judicial branches can produce deadlock when executive and legislative branches are controlled by different parties. This indeed currently blocks effective action by the polity, but this is not at the core of the crisis, since it is doubtful that even a Congress controlled by a filibuster-proof Democratic majority would implement the structural changes needed to prevent similar crises in the future.

Intra-component distortions in the economy are more relevant to the current recession. The economy is differentiated into informational vs. matter-energy sectors. The informational sector – especially its financial part – has grown anomalously large relative to the matter-energy sector. Although economic theory ascribes to the financial sector the important function of resource allocation, it is doubtful that the added value that this sector contributes by performing this function justifies the amount of wealth it siphons off for itself. Here the situation is the reverse of a matter-energy-like system colonizing an information-like lifeworld (as Habermas describes it): in the economy, it is (part of) the informational sector that is parasitic on the rest of the economy and on the community.

The economy may also be too integrated, so disturbances in parts of it can spread and become amplified. It also generates bubbles, which shows that it is not optimally self-regulating. The real estate bubble was an important cause of the current recession, and before this bubble there were many others. The tendency to generate bubbles is a structural flaw in that the positive feedback that manifests in speculative behavior is not adequately controlled by the negative feedback that characterizes ideal markets. From one viewpoint cyclic behavior is just an attractor that many dynamic systems exhibit, but from another point of view (Bateson 1979), cyclicity demonstrates the existence of a “logical contradiction” within the system.

Digression

Structural flaws are connected also with *other* societal problems. For example, the dominance of the economy over the polity limits our ability to protect the biosphere against harm from industrial activity – from climate change, depletion of non-renewable resources, species extinction, etc. If allowed to do so, the economy takes control of nature, which it treats as mere “environment” as shown in Figure 3(a), i.e., as a source for resources and a sink for wastes, both incorrectly assumed to be infinite. The relation that economies actually have with nature is depicted in Figure 3(b): an economy is really a

subsystem of a subsystem that completely depends on the biosphere. Societies are wholly owned subsidiaries of nature, but even if we insist on the illusion that the reverse is true, nature “belongs” to the community, not to the economy or polity. Protection of nature may require new community-nature links, in which natural commons (air, water, etc.) are held in trust for the future as part of a public sphere that is partially autonomous from both economy and polity. Community is not only the locus of societal integration; it is the component via which the future of the society can compellingly present its needs to its present.

A second example of a structural flaw that only indirectly relates to the current recession (but aggravates its consequences) is one specific aspect of the community-economy link, namely the connection that now exists between employment and health insurance. This link is a historical artifact that today is irrational, just as it would be irrational if children’s access to education depended on their parents’ employment. While the optimal roles that the community, polity, and economy should play in the provision of health care may be debatable, it is plain that health care and education do not simply belong to the province of the market. This example and the previous one are mentioned to highlight the fact that Parsons’ model is useful not only for talking about the recession but also about many other issues confronting society today.

4. Fixing the flaws

As mentioned in the Introduction, the *99Percent Declaration* of the Occupy movement contains demands that address some of the structural flaws discussed in the preceding section. While this document is unofficial, and while there is also no logical connection between the signature tactics of OWS – the occupation of public spaces – and these demands, the movement has raised fundamental issues for public discussion.

From the joint perspective of Parsons’ model and OWS demands, if economic crises like the current one are to be avoided in the future, the central challenge is to establish the right direction of control between polity and economy. This requires both increasing and decreasing the separation between these two components. With respect to economy→polity influences, separation needs to be increased; with respect to polity→economy influences, separation needs to be decreased. These changes, plus some others discussed below, are listed in Table 1.

Table 1. Needed structural changes

Only structural changes relevant to the current recession are noted. Intra-component changes discussed below are not included.

Parsons’ model	Some Occupy demands (and other correctives)
economy→polity	insulate guardian functions from commercial influence
polity→economy	empower regulation keyed to scale
economy→community	decrease & internalize negative externalities of the economy
community→polity	election reform; regulatory transparency

With respect to economy→polity interactions, a sharp distinction needs to be made between the “guardian” values of the polity and the “commercial” values of the

economy (Jacobs 1994). Plato long ago observed that mixing these deeply different societal functions invariably leads to corruption, and advocated radical measures to prevent this. This separation is forcefully called for in the Declaration, although, of course, without using this guardian-commercial terminology:

"3. Elimination of All Private Benefits and "Perks" to Politicians. The 99% of the American People demand the immediate prohibition of special benefits to all federal public employees, officers, officials or their immediate family members. Public officials, politicians and their immediate families shall be banned from ever being employed by any corporation, individual or business that the public official specifically regulated while in office. No public employee, officer, official or their immediate family members shall own or hold any stock or shares in any corporation or other entity that the public official specifically regulated while in office until a full 5 years after their term is completed.

There shall be a complete lifetime ban on the acceptance of all gifts, services, money or thing of value, directly or indirectly, by any elected or appointed public official or their immediate family members, from any person, corporation, union or other entity that the public official was charged to specifically regulate while in office. The term "specifically regulate" shall mean service on a committee or sub-committee or service within any agency or department of the federal government responsible for the regulation of the person, union, corporation or entity seeking to directly or indirectly confer a benefit to a public official.

It may well be that only radical measures of this sort, which enact Plato's (and Jacobs') views into law, can achieve the separation of economy and polity that is necessary to avoid corruption. Such measures may require a constitutional amendment.

This may still be insufficient to alter the power balance between polity and economy. Public funding of elections may thus also be needed, since the prohibition of campaign contributions from corporations and unions wouldn't preclude contributions from wealthy individuals and well-funded political groups, which are more legitimate, being part of the community-polity rather than the economy-polity link. Another demand of the Declaration calls for this measure to reduce the political influence of big money:

"1. Elimination of the Corporate State ...Private fundings of campaigns from concentrated sources of wealth have corrupted our political system. Therefore, all private funding of political campaigns shall be replaced by the fair, equal and total public financing of all federal political campaigns...

It has been estimated that 94% of all federal political campaigns are won by the candidate who spends the most money. Our elected representatives spend far too much of their time fundraising for the next election rather than doing the People's business. This constant need for more and more money, causes our politicians to labor under conflicts of interest that make it impossible for them to act in the best interests of the American People."

The dominance of the polity by the economy also derives in part from the legal status of corporations as "persons," which as noted above usurps a status that properly

belongs only to members of the community. This status needs to be revoked, and this also is a salient demand of the Declaration:

"2. Abrogation of the "Citizens United" Case. The immediate abrogation, even if it requires a Constitutional Amendment, of the outrageous and anti-democratic Supreme Court holding in *Citizens United v. Federal Election Commission*. This heinous decision proclaimed by the United States Supreme Court in 2010 equates the payment of money to politicians by corporations, wealthy individuals and unions with the exercise of protected free speech. We, the 99% of the American People, demand that institutional bribery never again be deemed protected free speech."

With respect to polity→economy interactions, the changes needed are the opposite of the changes needed in the economy→polity link, namely the components need to be more tightly linked. The polity must have the powers necessary to regulate both the information, e.g., financial, and the matter-energy sectors of the economy, the former especially to prevent financial collapse of the sort that almost occurred in the present crisis and to limit appropriation of wealth by the financial sector to what is justified by the function that it serves, the latter to address dangers of pollution, resource depletion, and species extinction. Regulation must be able to force economic entities to internalize negative externalities on the community and nature; by such internalization, market forces are mobilized towards reducing these externalities.

As to specifics of reregulation of the financial sector, the Declaration includes some proposals in items #16, "Banking and Securities Reform" and #18, "Ending the Fed." From a structural perspective, innovations in financial transactions ought to be assessed by regulators in terms of the function of resource allocation that theory credits this sector with performing. For example, it is doubtful that high speed computerized trading contributes positively to this function; unless such a positive contribution can be demonstrated, regulation should limit this activity because of the instability that it causes.

More generally, regulation needs to depend on *scale*, and this principle needs to be accepted as a central consideration that should govern the polity→economy link. The larger the impacts that an economic entity can have, the more transparent its actions must be to public scrutiny, and the more tightly the entity must come under regulatory control. Very large and powerful economic entities that can massively impact the community should simply be illegal. For such entities, only a principle of "too big to fail = too big to exist" can prevent similar crises in the future. Bigness that poses systemic risk should be even more unacceptable than bigness that stifles competition. Small economic units, however, should not be afflicted by onerous bureaucratic requirements. This requires vigilance since bureaucratic hypertrophy is a characteristic dysfunction of the polity. Regulation itself should be fully transparent to public scrutiny.

Even if the sizes of economic entities were limited, the economy is so highly interconnected that small disturbances can still have systemic effects. When an adverse system-wide event occurs, its causes are only superficially the specific disturbances that triggered it, but more fundamentally the critical state of the system that amplified and spread the local dysfunction. Such an underlying vulnerability can be mitigated to some extent by limiting leverage and perhaps also by reducing direct dependencies between

firms, but interconnectivity is a mark of mature economies, and indirect links may suffice to spread disturbances throughout the system. It would be desirable to reduce the disproportionate size of the financial part of the economy, but even were this included within a regulatory mandate, it is unclear how this could be accomplished. It is also unclear if regulation could inhibit the tendency of the economy to produce bubbles; limiting their size to reduce negative externalities and to avoid the moral hazard of bailouts may be the best that can be done. So apart from the problem of giving regulatory agencies the powers needed to do their job, there is the problem of providing tools with which to do this job, and the related problem that the theory used by regulators and policy makers and by economic agents may be inadequate; witness the failure of the theory of financial risk that was widely accepted prior to the recession.

Weakening the economy→polity link and strengthening the polity→economy link may need to be supplemented by also strengthening the community→polity link. Two demands aimed at doing so are included in the Declaration: (1) term limits (item #4 in the Declaration), and (2) abolition of the Electoral College and other campaign finance and election reform (item #19). These issues are too complex to be taken up in this paper; the goal in community→polity changes should be to increase the accountability of the polity without diminishing its efficacy, and to clearly establish the primacy of the organizing principle of democracy over the organizing principle of capitalism.

Finally, there is the need for change within culture. The prevalence of false beliefs about the self-regulating capabilities of markets, which is the consequence of the colonization of culture by the economy, needs to be counteracted. Public awareness that instability and dysfunction are as natural to economies as stability and optimality would enhance the legitimation of the polity→economy link. Economic regulation keyed to scale should be understood as the way to preserve, not destroy, markets. And while the distorted view of nature as resource – Figure 3(a) as opposed to Figure 3(b) – has been partially corrected by the growing recognition of the valuable “services” that ecosystems perform, a more radical understanding of the place of human societies in the biosphere is still needed to prevent collapse of a bubble that is not merely economic but civilizational.

5. Summary

Theories of complexity – in older terminology, systems and cybernetics theories – can augment the intellectual resources of the disciplines of the social science and history. Parsons’ model, a synthesis of sociological and early systems theory, offers what Gell-Mann (1994) called “a crude look at the whole,” here a societal whole. The thought of Jane Jacobs, cited for its revival of Plato’s distinction between “guardian” vs. commercial ethics, is systems-theoretic in character. Complex systems analyses of the recession and the Occupy movement have recently been offered by Bar Yam (2011). Other systems ideas that might be useful for understanding bubbles and the dynamics of networks are self-organized criticality (Bak 1996), the adaptive cycle model (Holling & Gunderson 2002), and scale-free networks (Barabási & Albert 1999).

Systemic problems require systemic solutions, i.e., structural change in societal differentiation. The current recession and the inability of the political system of the US

to prevent it before it happened and deal with it after it happened point to basic flaws in the relations between economy, polity, community, and culture in the US societal system. Although concrete analysis of these flaws cannot avoid political judgments, seeing the problem as being one of faulty differentiation gives this critique a relatively non-combative tone. The diagnosis also suggests that with structural change these flaws are remediable. The organizing principle of a market economy is compatible with the organizing principle of democracy if – and only if – primacy is given to democracy.

Parsons' model is not introduced here to discover societal problems or possible solutions to these problems that are now unrecognized. It is introduced as a framework within which known problems and their possible solutions can be discussed coherently. Abstract models may be more effective than concrete models for identifying the essence or deep structure of societal problems, for seeing the forest rather than the many trees. From a complex systems perspective, the essence of the current recession, viewed at a suitable level of abstraction, is in fact not particularly complex. Public understanding of the need for structural changes in the US societal system may be currently lacking, but an increase in such understanding in the future is not unimaginable.

Acknowledgments

Thanks to Hugo du Coudray and Elinor Langer for helpful comments on this manuscript.

References

- Adams, Richard Newbold (1975). *Energy and Structure: A Theory of Social Power*. Austin: University of Texas.
- Bak, Per (1996). *How Nature Works: the Science of Self-Organized Criticality*. New York: Springer-Verlag.
- Bar-Yam, Yaneer (2011). "Complex Systems and Occupy Wall Street." <http://necsi.edu/projects/yaneer/occupy.html>
- Barabási, Albert-László and Albert, Réka. (1999). "Emergence of scaling in random networks." *Science*, 286: 509-512
- Bateson, Gregory (1979). *Mind and Nature: A Necessary Unity*. Bantam Books, New York.
- Bennett, John G. (1961). *The Dramatic Universe: Vol. Two: The Foundations of Moral Philosophy*. London: Hodder & Stoughton.
- von Bertalanffy, Ludwig. (1979). *General System Theory*. New York: George Braziller.
- Gell-Mann, Murray (1994). *The Quark and the Jaguar: Adventures in the Simple and the Complex*. W. H. Freeman & Co., New York.
- Habermas, Jürgen (1984-87). *The Theory of Communicative Action*. Translated by Thomas McCarthy. Cambridge: Polity.
- Holling, C. S. & Gunderson, L.H., eds. (2002). *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, D.C.: Island Press.
- Jacobs, Jane (1994). *Systems of Survival: A Dialog on the Moral Foundations of Commerce and Politics*. New York: Random House.
- Occupy Wall Street (2011). <https://sites.google.com/site/the99percentdeclaration/>

- Parsons, Talcott (1966). *Societies: Evolutionary and Comparative Perspectives*. Englewood Cliffs New Jersey: Prentice-Hall, pp. 5-29.
- Parsons, Talcott (1971). *The Systems of Modern Societies*. Englewood Cliffs New Jersey: Prentice-Hall.
- Plato (1991). *The Republic: the complete and unabridged Jowett translation*. New York: Vintage Books.
- Simon, Herbert A. (1962). "The Architecture of Complexity." *Proc. Am. Philosophical Society*, 106: 467-482. Reprinted in Simon (1981). *The Sciences of the Artificial*. Cambridge: M.I.T. Press.
- Zwick, Martin (2001). "Wholes and Parts in General Systems Methodology." *The Character Concept in Evolutionary Biology*, Gunter Wagner, ed., Academic Press. pp. 237-256.