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# RESHAPING AGRICULTURE'S CONTRIBUTIONS TO SOCIETY

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# The poverty of sustainability: rescuing economics from platitudes

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## Abstract

The idea of sustainability has become confused and incoherent. If sustainability is to regain a plausible pertinence to economic policy it must be understood to encompass two realms: (1) human interaction with nature; and (2) human interaction with others with respect to their interaction with nature. The on-going redefinition of the *purposes of nature* requires that institutions—norms, rules—property regimes—undergo constant evolution so that human action conduces to nondestructive action. Caution in the social realm is the greatest risk to environmental sustainability.

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## 1. Introduction

The idea of sustainability has had a curious life history. It started out as an interesting idea, then became tied to the economics literature in growth theory, soon became a rallying cry for those opposed to globalization, and now finds itself part of the official title of offices, divisions, bureaus, and directorates in many of the world's most visible organizations. From the title of this article the reader may be led to suppose that the idea of sustainability has become a mere platitude. Sustainability is, in fact, a platitude precisely because the term conveys nothing of substance.

The original idea of sustainability concerned consumption levels that would meet the “needs” of current people without compromising the “needs” of future generations (Dixon and Fallon, 1989; WCED, 1987). What exactly constitutes the “needs” of present and future people is an empirical challenge of unsurpassed difficulty. Indeed, it is so difficult that the quest to give this idea empirical content induces yet another round of platitudes. Note that the original idea was one of constraining current consumption such that those of us now living—who necessarily stand as dictators

over the endowments and consumption opportunities available to future people—would not so foul the natural world that those who are to come after us would inherit a vast wasteland. A perusal of the current literature shows that the idea of sustainability has now become transformed into a conversation about consumption “entitlements”—clean water, health, housing, nutrition, education, employment, and income (Parris, 2003). Of course, there remain discussions about maintaining life-support systems, and here the emphasis concerns climate change, atmospheric ozone, the oceans, biodiversity, chemical contamination, deforestation, and land-use issues.

While this session of the conference edition concerns environmental stewardship, it is essential to indulge the emergent trajectory of the general discourse on sustainability by extending the discussion to encompass the nexus between humans and nature. That is, nature must be connected to people, and people to nature. In more specific terms, the central role of the *constructed domain within which people interact with each other as they go about interacting with their physical surroundings will be emphasized*. The three other plenary papers in this session on environmental stewardship follow a similar pattern—two focusing on agriculture and the environment (López, and Rola and Coxhead), and the other

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focusing on resource degradation and poverty (Ehui and Pender).

A major part of the difficulty with the current idea of sustainability among economists is its focus on capital—both natural and man-made—rather than on the institutional arrangements (norms, working rules, and property regimes) that give economic value to particular actions and not to others. There is a long history in economics concerning the precise meaning of the idea of “capital.” But the real problem is that capital as an economic concept is incoherent and incomplete without reference to the institutional arrangements that indicate the ways in which that physical object called “capital” can or cannot be used in an economy. Examples of these issues include to whom does the capital belong? Who may control its use? Who may and may not receive its income stream? What are the social parameters of acceptable use of that object? Who may use it to obtain credit and to settle debt? The issue here concerns the social and economic content of what are called *natural* and *man-made capital*. And that social and economic content is determined precisely by the institutional structure of an economy. Rendering the idea of sustainability useful requires moving beyond the traditional focus on natural and man-made capital for the simple reason that the idea of capital is entirely dependent on the socially constructed rules that relate individuals and groups to physical objects—whether naturally occurring or humanly constructed.

This implies that while the precise meaning of sustainable development is open to debate, there can be no doubt that the ecological dimension of sustainability cannot be considered and understood apart from the social dimension. This necessarily follows from the fact that the social dimension concerns how and why humans interact with their physical surroundings as they do. Are tropical forests being cleared at a rate that concerns ecologists and atmospheric scientists? Why is this happening? Is soil erosion in agricultural areas threatening future agricultural production and river ecosystems? If so, what are the plausible reasons for this unwanted outcome? Do industrial and agricultural chemicals pose a threat to living organisms? And if so, why? Are unique habitats—repositories of rare genetic resources—being savaged in the name of “progress?” If so, whose idea of “progress” is driving these outcomes? Each of these physical eventualities represents the possible outcome of human interaction with the

environment. More important, these physical manifestations of human behavior are also manifestations of human interaction in a social and economic domain. If we are to understand sustainability we must be concerned with the ways in which humans relate to each other—and why those particular interactions produce particular implications for the natural environment.

The research challenge here is to understand human behaviors *not* at the point where individuals interact with nature.<sup>1</sup> Rather, we must understand human behaviors from the point where individuals are driven to act not out of choice but out of necessity. A government heavily indebted to foreign creditors is a government without many choices. Being landless is to be without compelling choices. Farmers, who cultivate steep hillsides, thus giving rise to soil erosion, can be said to exercise choice in only a very limited sense of that word. Clear thinking about sustainability is not advanced if analyses start from the notion that most of the participants in the systems being studied act on the basis of free choice. Choosing between the slums and the remote hills may look like choice to some, but it is a categorical mistake to call such behavior the result of “choice.” When necessity forces actions there is little scope for choice. If you cannot move, you are not choosing to stand still.

The problem, therefore, is to understand the conditions in which individuals and groups find themselves acting—not choosing as an expression of free will, but responding as a manifestation of necessity. Everyone is embedded in a structure of economic and social relations that are not of their choosing. Humans are born into such a structure and, depending on the luck of that birth, they stand a reasonably good chance—or no chance at all—of influencing that structure in the future. Regardless of their capacity to alter that structure, everyone faces differential opportunities to move fluidly within that structure, or to be thwarted by it at most every turn. And this raises an interesting issue in the matter of sustainability.

To talk of the sustainability of social and economic arrangements—the working rules and property

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<sup>1</sup> This seems to be the tradition in much of this work where economists seek to understand tropical deforestation by constructing econometric models with “explanatory” variables such as miles of road, “weak” property rights, rates of in-migration, etc. For a critical methodological look at this genre of work see Bromley (1999).

regimes—is to raise an awkward question. Is the focus on the sustainability of the arrangements regardless of the social and ecological consequences that flow from them? Or is it the maintenance of a process of gradually searching for—and evolving into—new institutional arrangements that will assure both ecological integrity and the general ennobling of human life over the long run? That is, is the concern to maintain (sustain) a specific *structure* or a particular *process*? This question reminds us that traditional labels and approaches can be problematic. Notice that cautious approaches to environmental behaviors may be precisely what are needed to avoid serious ecological disasters. Humans must be careful with the forest, careful with genetic resources, cautious with endangered species, and indeed circumspect about the arrogance of human domination of nature. Conservative principles serve well in the realm of protecting the environment against the onslaught of human exploitation. Sustainable development is, in a sense, a cautious and precautionary approach to how humans will interact with nature.

But caution in the social and economic realm may well be the enemy of sustainability. This paradox arises because solutions to existing destructive uses of nature may indeed entail quite drastic changes in the working rules and their correlated organizational manifestations that now constitute plausible reasons for destructive behaviors toward the environment. If steep hillsides and other fragile lands are overrun with migrants desperate for food and livelihood then one must ask why the fragile hillsides represent the only option for those seeking a better life. What if there are large expanses of quite good agricultural land that might be made available for these landless people, yet which are currently protected by a set of social and economic relations that lead to conditions of great income disparities and landlessness? Those individuals well served by prevailing institutional arrangements from which massive landlessness springs may not be eager for this attention and thus a conservative approach to social and economic relations may turn out to be the enemy of ecological and social sustainability.

If timber concessionaires are destroying forests then the question must be asked: "Why is this behavior allowed?" (Ascher, 1999; Bromley, 1999). These forest practices constitute serious threats to nature and if the prevailing institutional arrangements are seen as the

reasons for the results (the plausible explanation of the behaviors) then those institutional arrangements are immediately suspect. To the extent that certain segments of society are well served by those working rules—and if they were not well served by them it might be impossible to explain the existence of such rules—altering current behaviors and practices inimical to ecological sustainability threatens the presumed goodness (instrumentality) of the existing working rules. And once there is talk of the need to alter existing working rules and practices, particular vested interests—well served by those rules—can be expected to mobilize against the proposed changes.

The challenge, therefore, in understanding sustainability, is to search for an understanding—an explanation—of the reasons for prevailing rules. Many of the working rules and property regimes that mediate human action toward the environment are products of the traditional idea that conquering nature was a plausible means of inducing economic development. Nature has traditionally been seen as a storehouse of raw materials whose proper purpose was to serve human extraction and use. That is, nature existed to be subjugated to the human will, and her bounty—timber, minerals, fish, water, kinetic energy for hydroelectric generation, coal, oil, natural gas, solar energy—was there to serve human desires. In addition to this provision of raw materials, the purpose of nature was also to provide a stream of resource services—carrying away human and industrial waste. Accordingly, the institutional arrangements pertinent to human–nature interactions throughout much of human history have been predicated on this view of the purposes of nature.

But when the purpose of nature is itself contested—as it surely has been for some time now—then caution in the social and economic realm, where caution means a rigid and aggressive defense of the prevailing institutional setup, instead of enhancing ecological sustainability will almost certainly undermine it. This threat from a cautious strategy arises because the existing institutions and organizations were crafted and refined during an era when there was a different purpose of nature than that which is now emerging. With new and evolving ideas about the purposes of nature it follows that there must be reconsideration of the institutions that mediate human interaction in the social and economic realm, but also in interacting with nature. If the new purpose of nature is not reflected in modified

institutional arrangements then nature will continue to suffer, and eventually it will be impossible to maintain existing social and economic relations. It is for this reason that caution in the social realm might very well lead to serious threats to nature.

This brings about an interesting twist, in the sense that sustainability in the social and economic realm depends on *constant change in social and economic institutions, and not in their preservation*. Social and economic stasis is the enemy of environmental sustainability. There must be means whereby the institutions of nation-states can be continually modified in accord with the inevitable evolution in the imagined purposes of nature. It may seem odd that sustainability implies change and evolution rather than caution and stasis, but this essential evolution is driven by the fact that the purposes of nature are changing. If institutional arrangements fail to adjust accordingly, social processes will be threatened and out of that threat will emerge a profound danger of accelerated harm to nature.

The correlated point here is that the standard policy prescription to flow from much of the economics literature is that property rights must be secure in order to protect nature. Indeed, if there is one aspect of the Washington Consensus that pertains to environmental policy it is this constant harangue about the manifold wonders of secure property rights. Unfortunately, this prescription is flawed on two grounds. The first flaw is a theoretical one. Those economists who pronounce with great conviction on this subject reveal their ignorance of the *iron law of the discount rate* (Page, 1977). The obvious implication of the iron law of the discount rate was made clear for fisheries over 30 years ago by Colin Clark who found that "depending on certain easily stated biological and economic conditions, extermination of the entire population may appear as the most attractive policy, even to an individual resource owner" (Clark, 1973, p. 950) (emphasis added). Clark's analysis shows that private ownership is consistent with resource destruction (Pearce and Turner, 1990). The iron law of the discount rate dispenses with the notion that private property is *sufficient* to ensure wise resource management.

The second flaw comes in the idea that private ownership is still *necessary* for stewardship. Those who insist that secure property rights are necessary for the protection of nature confuse the general proposition about property rights with the specific proposition

(Becker, 1977). That is, the advocacy of *clear property rights* has been distorted into the idea that only *individual property rights* will do the work of protecting nature. Since the iron law of the discount rate defeats the sufficiency claim, and since many nations have effective regimes of both common property and state property, we see that private property is neither necessary nor sufficient to protect valuable aspects of nature. What is essential is that *some* property regime is in place so that the natural resource is not an open access resource (Bromley, 1991). The decisive issue here is that any property regime—to be worthy of that name—requires the presence of an enforcement (compliance) structure.

Property regimes are not some divine intervention revealing to mere humans the "truth" about human interactions with nature. Rather, property regimes at any moment simply reflect the collective determination of which settings and circumstances seem worthy of extraordinary protection. Settings and circumstances are not protected with a rights regime because they are "property." Rather, those settings and circumstances deemed of extraordinary importance come to acquire the protection that we associate with property rights (Bromley, 1991)—an important point when institutions and the continual evolution in the purposes of nature are considered. Recall that each generation has inherited its values, its institutional arrangements, and its governance structures from those who came before. The law in general and property law in particular, at any moment reflects that heritage.

Public policy is best understood as collective action in restraint and liberation of individual action. Since collective action results in new institutions (new working rules) these new working rules differentially restrain and liberate particular individuals in their actions. These working rules also expand individual action in the sense that new working rules augment the capacities of certain members of a particular society to have their interests given protection. When the nation-state grants rights to individuals—but especially property rights—the state is thereby expanding the reach of the individual. This follows from the fact that to have a right is to have the capacity to *compel* the state to act to protect your interests.

New public policy is simply the application of new collective action that will simultaneously restrain and liberate the field of action—the choice domain—of

individuals. If firms are no longer able to discharge their wastes into nearby rivers then their field of action has been restrained, and the field of action of those who prefer clean rivers has been enlarged (liberated). If land reform expands the choice domain of the landless then it simultaneously constrains the choice domain of those who previously imposed their will on landless peasants. If timber concessionaires are restrained from aggressive harvesting of trees in fragile ecosystems then those who suffered at the hands of deforestation have been liberated from this imposition.

These issues in sustainability then emphasize the importance of the processes whereby institutional arrangements change over time, i.e., of the need for an evolutionary environmental economics.

## 2. An evolutionary environmental economics<sup>2</sup>

The idea of sustainability can only come to have coherence and operational content if it is understood to relate to a process whereby the working rules and entitlements that mediate individual choice sets are continually modified ("worked out") in response to *new emergent ideas about the purposes of nature*. The work of Thorstein Veblen provides a good starting point in the development of this line of thought. It is both ironic and unfortunate that his popular book *The Theory of the Leisure Class* is well known to most economists (perhaps because of its catchy metaphors (conspicuous consumption, snob effect, conspicuous waste) while his much more profound and substantive article in the *Quarterly Journal of Economics* entitled "Why Is Economics Not an Evolutionary Science?" has been ignored. This is ironic because the *Quarterly Journal of Economics* was, at the time (1898), the most prestigious outlet for economists. And it is unfortunate because Veblen's perceptive evolutionary insights were soon to be surpassed and overwhelmed by the static marginalist equilibrium economics of Robbins, Edgeworth, Hicks, Kaldor, and Samuelson in what has come to be called "the ordinalist revolution" (Cooter and Rappoport, 1984).<sup>3</sup>

<sup>2</sup> See Norgaard (1981) for a prescient account of coevolution in social and ecological systems.

<sup>3</sup> Another of Veblen's profound works pertinent to this theme is "The Limitations of Marginal Utility," 1909.

The flaw in ordinalist economics is that it skirts the issue of value (embedding it in the ultimate relativist triumph of the indifference curve). When combined with the pernicious idea of equilibrium, the individual is thereby emasculated from having any role to play other than performing the right calculations in order to achieve some alleged optimum. Notice that the concept of equilibrium celebrates and ratifies the notion of arrival—of attaining something that henceforth will be automatically maintained, at least until the next exogenous shock perturbs the system. That so few economists are troubled by the centrality of equilibrium models and metaphors in economics says more about our fascination with physics and its machines than with the ongoing and evolving process of people getting a living from their interaction with each other—and with nature (Mirowski, 1989). To suppose that the concept of equilibrium is useful in this pursuit of understanding and explaining human action remains one of the more enduring puzzles in contemporary economics (Brock and Colander, 2000). Indeed, the concept of equilibrium, with its message of stationarity, stands as one of the paramount hurdles to clear thinking about sustainability broadly defined.

When economists undertake economic analysis and economic advice, the standard approach invariably entails thinking about some desired state of efficiency running off into the future that will serve us well until some perturbation upsets this happy state. We are not sure what will change, but we are sure that when it changes the economy will adjust to some magical new equilibrium pathway. Of course, increasing or decreasing returns may complicate matters. And of course, externalities can make this attainment difficult. But once these minor inconveniences in market-produced outcomes have been rectified, all will be efficient once again. This smoothly running machine remains the dominant mental (and analytical) model of much of contemporary economics. But the simplicity of the machine is precisely its abiding weakness. To assume that the human condition is correctly described and modeled as a tractable and moncausal mechanism is to do serious violence to reality. Consider the following quote from Veblen:

The economic life history of the individual is a cumulative process of adaptation of means and ends that cumulatively change as the process goes on,

both the agent and his environment being at any point the outcomes of the last (the previous) process. His methods of life to-day are enforced upon him by his habits of life carried over from yesterday and by the circumstances left as the mechanical residue of the life of yesterday . . . What is true of the individual in this respect is true of the group in which he lives. All economic change is a change in the economic community . . . The change is always . . . a change in habits of thought . . . but . . . there remains the generic fact that their (an individual's) life is an unfolding activity of a teleological kind . . . The economic life history of any community . . . is shaped by men's interest in the material means of life . . . Primarily and most obviously, it has guided the formation, the cumulative growth, of . . . economic institutions' (Veblen, 1990, pp. 74-76).

The essential point here is that successive generations are the necessary *creators* of the structures and functions of the local environment within which they are embedded. That is, individuals often make and remake their economic settings and circumstances. Of equal importance, from the outset, individuals are *constituted* by the settings and circumstances in which they have been shaped and find themselves embedded. That is, the constructed social and economic settings and circumstances come, to a certain extent, to *form* individuals and to predispose them to certain "habits of mind." John R. Commons referred to this as the "instituted personality." It is this perpetual interaction between individuals and their constructed surroundings that led Commons to refer to the process of "artificial selection." That is, while biological evolution may be "natural," social evolution is constructed ("artificial") (Commons, 1931, 1968, 1990). It is constructed precisely because individuals are capable of receiving feedback from actions taken, processing the lessons from that feedback, and re-constructing the norms, working rules, and entitlements (property regimes) that stand as the plausible explanation for the outcomes now realized to be in need of modification. Notice that these ideas of both Veblen and Commons provide the basis for thinking of economics in evolutionary terms.

This evolutionary approach is impossible in the equilibrium models and metaphors of contemporary economics. In the currently accepted view of human action, the individual is—as Veblen put it—nothing but

a "lightning calculator of pleasure and pain." Veblen pointed out that this hedonistic formulation forces us to assume that the individual has neither antecedent nor consequent. More specifically, "He is an isolated, definitive human datum, in stable equilibrium except for the buffets of the impinging forces that displace him in one direction or another . . . the hedonistic man is not a prime mover. He is not the seat of a process of living, except in the sense that he is subject to a series of permutations enforced upon him by circumstances external and alien to him" (Veblen, 1990, pp. 73-74).

The essence of an evolutionary economics is seen in the fact that when existing institutional arrangements are found to be the plausible reason for behaviors that lead to unacceptable environmental outcomes, there will soon be citizen pressure on these institutional arrangements. In the early stages of this process those seeking change will be small in number though possibly loud in voice. Their efforts will be resisted and dismissed as the special pleadings of a particular minority. This has certainly been the case for environmental activists the world over. The practice of politics and of policy reform is the process of bringing others along to one's perspective. As the vocal minority mobilizes arguments in its behalf, soon others will join in. When their numbers, and the volume of their collective voice, reach a critical threshold they will be noticed. Suddenly, it will be realized that there is a "policy problem" that may no longer be safely ignored. It is at this point that the resiliency of a nation's institutional arrangements will come under scrutiny. If these arrangements are rigid and resistant to change, and if the groundswell for change gains momentum, it will not be long until these two forces will collide.

One way to think of evolution in the institutional arrangements of society is to understand the syllogism of practical reason. Practical reason brings together two kinds of premises. The first we call the *volitional premise*. This premise can be thought of as outcome in the future for the sake of which a particular event (or action) must be undertaken today. If there is a new felt need to protect fragile hillsides then particular actions are required now. If there is a new felt need to protect unique ecosystems from destruction, then particular actions must be taken now. The policy question is: if we wish particular future states then what must be done now to realize those states? Beyond the *volitional premise*, practical reason requires an

*epistemic premise.* The epistemic premise mobilizes current knowledge—both “scientific” and traditional—to offer a plausible guide for what is necessary that the volitional premise might be realized. If it is intended that fragile hillsides are protected in the future from both migrants and the timber companies then the epistemic premise indicates those actions that offer plausible means whereby those intentions might be realized.

Thus, new public policy is the conjunction of new collective intentions, new working rules (new institutions) that are entailed by the epistemic premise, and the presumption of compliance. That is, the policy process always starts with a consideration of particular desired outcomes in the future (the volitional premise). The question becomes, how clean do we want our water to be? Or, the question becomes, what sort of natural environments ought to be bequeathed to future persons? Or the question may concern the appearance of the countryside. From the answers to those questions an emerging consensus will ultimately prevail—and it might take a very long time—that advocates new parameters for water quality, or new rules for habitat preservation, or new rules about deforestation.

An evolutionary perspective on the topic of sustainability suggests a need to understand the reasons for actions as running from the future back to the present. Recall that when new policies are contemplated, the essential question is: what outcome in the future would justify a particular course of action today? Another way to put this is to say that a particular event in the future is the *reason* (or the explanation) for the action taken today. Or, what purpose in the future did today’s action serve?

When policy is understood in this way it is possible to understand that particular aspects of the natural environment are preserved today not because it is suddenly economically efficient to do so, but because of a collective commitment regarding how the future ought to be constituted and how it ought to unfold. Thinking of sustainability in this way shows that deforestation in the developing world continues not because of weak property rights, or not because of roads, but because it serves the purposes of the current government to allow it to happen. It helps us to see that biodiversity is allowed to be destroyed because doing so serves the interests of those in control of the machinery of state.

In contrast to this evolutionary approach, traditional policy analysis seeks to explain and justify future economic circumstance in terms of the present. When economists calculate the present-valued benefits and costs of possible actions to protect nature, this serves as an example of letting the future fall victim to a decision approach that considers the future in terms of how well it serves present interests rather than considering the present in terms of how well it serves the interests of the future (and those who will live then). The human will in action—*prospective volition*—assesses the present in terms of the future. Reasoning “backward” is precisely the act of understanding the present in terms of the future, and deciding how we wish the future to unfold for us. Prospective volition is the human will in action, informed and motivated by the plausible purposes of the future with respect to governance structures and processes. Are governance structures secure in serving the future if they permit devastation of the forests? Are governance structures secure if they ignore the relentless poverty of the majority of their citizens? Are governance structures secure if they serve only a tiny fraction of the population?

Sustainability requires not the precautionary principle but the *prudence principle*. Prudence entails an understanding of the need to modify existing institutional arrangements in recognition of the *evolving purposes of nature*. Environmental policy must be seen as a process whereby volitional premises are transformed into meaningful operational strategies and programs that will render the goals attainable. The “collective action” component of this definition tells us that new institutions—new policies—are the product of legislatures and courts whose job it is to translate nascent political sentiments into new rules which, with luck and careful analysis, will lead to new behaviors that are less destructive of biological resources. This serves to remind us that the problem of biological destruction is first addressed by understanding that the existing rules and customs constitute particular perverse incentives and sanctions for local people and thus constitute the plausible explanation for destructive use patterns of biological resources. New policy goals thus represent a conscious change of course. When the leaders of a number of nations declare that henceforth it will be their individual and collective policy to protect the world’s biodiversity from future threats, the first necessary ingredient is in place. But good intentions are

not enough—such goals must be matched by new institutions yielding a new constellation of incentives and sanctions that will lead to desired outcomes. These new institutions will entail new property relations among those with varying interests in the maintenance of biodiversity. Finally, any structure of new institutions must be accompanied by a correlated structure of compliance provisions that will assure new behaviors in keeping with the intentions of the new policy.

It is helpful to recall that any new policy is both a prescription and a prediction. Policies *prescribe* because they tell what changes in the rules are necessary to bring about new behaviors with respect to biological resources. Policies *predict* because they tell that if particular changes in the working rules or property regimes are implemented then new behaviors are likely to result. But of course problems are often misdiagnosed, and therefore it is to be expected that some prescriptions and some predictions will be mistaken. There must be mechanisms and procedures in place to assess those new ecosystem outcomes against the declared purposes of conservation policy, and to allow correction and modification when discrepancies arise.

This suggests that the new institutions emanating from the policy process will likely hold implications for perceptions of rights and duties among those who have been traditional ecosystem inhabitants. As with biodiversity conservation, the policy problem is to design a resource management regime—a new institutional setup—that would give those currently unhappy with the status quo a new and more satisfactory institutional setup, yet at the same time leave those whose behavior must change (the “losers”) no worse off than they are at present. That process of searching for Pareto safety entails the *asking for and the giving of reasons* (Brandom, 1994, 2000). Successful policy implementation entails sharing constructed accounts—called *created imaginings* by G. L. S. Shackle—in order that those who think they will gain and those who think they will lose can gradually come to grips with this evolving playing out of their own very particular settings and circumstances. And, of course, individuals will create quite different imaginings about possible outcomes. This should not surprise us. We have different imaginings because the *available actions* are novel events in our lives. We have *not done that before*, so why should it be supposed that each of us could have definitive data and similar imaginings concerning

precisely what will transpire? As Shackle says, “An action which can still be chosen or rejected has no objective outcome” (Shackle, 1961, p. 143).

The usual economic response to this statement would be to agree and add that we will therefore assign probabilities to future states so that proper calculations might then proceed. But this response misses the point. Shackle means here that it is impossible to offer a plausible description (account, prediction) of these alternative future states since those states have not existed before. All we have in our mind about those future states is contending *thoughts and imaginings*. Assigning probabilities to necessarily imagined and constructed outcomes in the future is to impart a false sense of *precision* when, in fact, *accuracy* is the unavoidable issue here. And the matter of accuracy must remain unresolved since we will never know what the future holds until we “arrive there.” We can discuss it, describe it, form quite firm convictions about it, but all of this discussion is nothing but a process of working out what the future *might* be—and it has little bearing on what the future *will* be.

Notice that evolutionary economics deals with this problem quite differently from what is found in conventional approaches to collective choice. In the standard story, the benefits and the costs are calculated by “experts” (that’s us) and then communicated to the citizenry so that they can make a “rational” choice. In the evolutionary approach, those estimates of gains and losses are reckoned by the individuals affected by such policies. That process of assessing impacts is itself one that accords a singular importance to the working out of perceptions of new settings and circumstances. It is a process that the pragmatist philosopher Charles Sanders Peirce (1934, 1997) would call the *fixing of belief*. And as Peirce insisted, *a belief is that upon which we are prepared to act*. I follow Shackle (1961) in his criticism of the standard economic approach that the ends of action are fixed, and that the individual need only address alternative means to those predetermined ends. I am certainly not alone here. Many writers suggest that it is precisely here that the rational choice theory goes off the rails—for the simple reason that the concept of *choice* as it is used in economics becomes incoherent. Or, as Amartya Sen has observed, contemporary economics turns the idea of choice into a mere play on words (Sen, 1977). Notice that if ends are given, and all that remains is for the individual to

compute the most efficacious means to achieve those ends, this is not *choice* but mere *calculation*. Individuals who can only calculate are not *choosing* among alternative actions—they are calculating to find the “best” means. Notice that this route leaves the individual, once the calculations have been made, with *no choices to make*. As long as the individual could not “rationally” have done other than what the calculations revealed to be the rational choice, the agent did not *exercise choice* (Lawson, 1997).

Indeed, Shackle has insisted that:

Conventional economics is not about choice, but about acting according to necessity.... Choice in such a theory is empty, and conventional economics should abandon the word.... The escape from necessity... lies in the *creation of ends*, and this is possible because ends, so long as they remain available and liable to rejection or adoption, must inevitably be experiences by imagination or anticipation and not by external occurrence. Choice, inescapably, is choice amongst thoughts, and thoughts... are not given (Shackle, 1961, pp. 272–73).

### 3. Summary and implications

...the fundamental premise of pragmatism's theory of action... does not conceive of action as the pursuit of ends that the contemplative subject establishes *a priori* and then resolves to accomplish; the world is not held to be mere material at the disposal of human intentionality. Quite to the contrary, pragmatism maintains that we find our ends in the world, and that prior to any setting of ends we are already, through our praxis, embedded in various situations.

—Joas, 1993, p. 130

Sustainability can be rescued from platitudes and incoherence by rediscovering the evolutionary predecessors of the ordinalist revolution in economics, and by connecting that with the idea of Shackle's *created imaginings* about future outcomes. I used to believe that conversations about sustainability were conversations about what is worth saving for the future (Bromley, 1998). I no longer believe that. Nor is sustainability usefully thought of in terms of how much of something (some natural capital) ought to be saved

for the future. I now insist that sustainability is best thought of as *looking for those aspects of our natural and constructed settings and circumstances for which we can, at the moment, mobilize the best reasons to make sure that they are passed on to future persons*. This is not a process in which we seek to maximize time paths of consumption or welfare into the infinite future. It is, instead, a process in which we search for the best reasons to bequeath a particular endowment bundle to those who will follow. And that task is precisely the subject matter of a properly constituted evolutionary economics. Unfortunately, not much has changed in the 100 years since Veblen thought about the topic.

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