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**FORMS OF “NATURALISM” IN SEMINAL NEOCLASSICAL TEXTS: AN
ANALYSIS AND COMPARISON OF LEON WALRAS, JOHN BATES CLARK,
AND WILLIAM STANLEY JEVONS**

A Dissertation Presented

by

MARK S SILVERMAN

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 2018

Economics

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Approved as to style and content by:

Gerald Friedman, Chair

Peter Spiegler, Member

Joseph Levine, Member

Léonce Ndikumana, Chair
Economics Department

DEDICATION

For Rose

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First, I want to thank my dissertation chair Gerald Friedman. Among other things, Jerry suggested I scale back my far too ambitious plans. Instead, he suggested, rather than look at the philosophical question of economic naturalism in general, I look at it through the prism of specific texts in the history of thought. Without that recommendation, I am sure this project would never have been completed, and perhaps barely started. More generally, I am very grateful to Jerry for supporting my peculiar and particular interests in the history of economic thought, throughout my entire time at UMass.

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satisfactory answer to her. Thank you then, Kristin, for believing in the value of this endeavor.

ABSTRACT

FORMS OF “NATURALISM” IN SEMINAL NEOCLASSICAL TEXTS: AN ANALYSIS AND COMPARISON OF LEON WALRAS, JOHN BATES CLARK, AND WILLIAM STANLEY JEVONS

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MARK SILVERMAN, B.A., SWARTHMORE COLLEGE

J.D., NYU SCHOOL OF LAW

Ph.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Gerald Friedman

I address here is the role of “naturalism” in certain seminal neoclassical texts. I outline both a positive and normative dimension to the term “naturalism.” Along its positive dimension, I use the term to mean that the social sciences ought to follow the method of the natural sciences. Along its normative dimension, I use it to mean that the natural order of things can provide for justice. I examine the role these concepts play in the works of Léon Walras, John Bates Clark, and William Stanley Jevons. The question I raise, through this examination, is whether the positive conception of naturalism eclipses possibilities of economic transformation, thereby undermining any coherent normative evaluation of whether a purportedly natural (i.e. unchangeable) set of economic facts or laws is “just.”

Walras argues that “economics” should be modelled on the natural sciences, and that value-in-exchange is natural. Simultaneously, Walras claims that economic institutions are “artificial.” He arrives at the former claim, I argue, because he believes that only by seeing economic laws and facts as “natural” can he demonstrate that they *necessarily* obtain; the latter claim is motivated by a desire to evaluate economic

institutions normatively. This leads Walras into a contradiction, I argue, insofar as the former claim undermines the latter.

Clark, initially, seems to avoid Walras' contradiction, insofar as he refers to economic laws as social, not natural. However, Clark's distinction between the social and natural is superficial, insofar as the social is conceptualized purely as a function of the natural. Clark does not imagine that the specifically *social* character of economic laws might transform the "natural." Further, for Clark, the natural not only shapes the social (economic) in a positive sense, it also renders economic laws *just*. But, like Walras, Clark's normative evaluation is undermined by his insistence on a fundamentally natural predicate for his economic laws.

For Jevons, like Walras, economics is properly modelled on the natural sciences, and, in particular, on the science of mechanics. Jevons then chooses to mechanize the economic agent *itself*, which, I argue, undermines any conception of human transformation of the surrounding "economy."

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CHAPTER 1

INTRODUCTION: FORMS OF NATURALISM

In this thesis, I want to explore the texts of three seminal authors in neoclassical economic thought, namely, those of Léon Walras, John Bates Clark and William Stanley Jevons. More specifically, I want to analyze these texts in the light of issues raised by their adoption and deployment of forms of “naturalism.” The term “naturalism” (like all isms) of course carries a variety of meanings, depending upon the context, and is therefore not used without risk. To cabin this risk, I will, in this chapter, define what I take to be various forms of “naturalism.” Framing and defining these various forms will help us create the theoretical architecture for the analysis and comparison of the authors to follow.

I will elaborate on these forms below. However, to begin with, I think we can immediately identify two such forms: a *positive* form and a *normative* form. The former holds implications about what might inexorably or necessarily exist (in more specific senses to be discussed below). The latter holds implications regarding the extent to which “just” economic relations—i.e., what *ought* to exist—might be immanent in, or at least revealed to us by, something in the “nature” of things.

Among the issues at stake here is the extent to which the naturalization (in the positive sense) of economic relations precludes certain possibilities for social change. After all, if there is something inexorable or unalterable about that which is “naturalized,” it would be pointless to try to alter it—simply because, as Walras put it (as we will see below), such a position would be “fatalistic” (Walras, 1926/1969, p. 56). Of course, if such naturalized economic relations, apart from holding true as a matter of necessity, *simultaneously* produce a society in which we *ought*

to live (because it is “just”), then we need not worry about altering society any further. Nature has, serendipitously, delivered on the promise of justice. And yet the very meaning of “justice” becomes suspect under such conditions—that is, we might question whether we can make meaningful normative evaluations with respect to purely “natural” facts.

I will not, in this thesis, attempt to address all the philosophical implications of the questions raised above. That would be too daunting a task. Instead, I want to use these questions as a means through which to read the texts set out below. That is, I will try to illustrate how these different forms of “naturalism” (and the different questions prompted thereby) are manifest in these texts.

1.1 The Natural, the Social, and the Necessary

My first task here is to set out a definition of “naturalism” in the positive sense noted above. I will define it here as synonymous with “methodological monism”—i.e., the claim that the social and the natural world are ontologically the same, or, at the least, that the former is reducible to the latter, such that both the natural and social sciences can justifiably proceed with the same method. The soundness of this claim is no minor question. Indeed, the case can quite plausibly be made that the question of “methodological monism” in economic thought has been one of the chief sources of methodological dispute in the development of what we today call “economics.”¹ I choose the term “naturalism” to describe this claim instead of methodological

¹ See, e.g., Hands (2001): “There has been a long tradition in the philosophy of social sciences which equates the word naturalism with methodological monism: the claim is that since there is only one natural world (even though it contains both human and nonhuman objects) there is only one appropriate way to investigate it: the method of natural science...naturalism in this sense has been a major (perhaps the major) theme in the history of economic methodology.” (p. 129); cf. DeCaro & Macarthur (2010), who define “scientific naturalism” as the claim that “natural science, and only natural science, tells us what there is in the world.”(p.3) See also(Bhaskar, 1998), who writes that the question “can society be studied in the same way as nature?” can be considered “without exaggerating...the primal problem of the philosophy of the social sciences.” (p. 1)

monism, however (the increased risk of ambiguity notwithstanding), because the “monism” at issue is not, as it were, an even-handed one. It does not treat the natural and social as co-equals to be welcomed into its unifying methodological fold, or enlightened epistemic graces. It does not, that is, simply declare the “natural” and the “social” to be ontologically similar, and therefore worthy of equal status. Instead, and rather unabashedly, it has a favorite. It takes sides. The natural is valorized. It is privileged over the social. Hence, the social sciences are welcomed to the (as I will argue, normatively invested) methodological table only to the extent that they emulate the natural sciences. Indeed, one might go so far as to say that the issue here is not one of “naturalizing” the social sciences, insofar as the social sciences are not even deemed sufficiently “scientific” in the first instance unless modeled along the natural sciences. That is, until the study of nature is before us as the model of scientific study proper, there are no “social sciences” for us even to speak of, and therefore there is nothing (yet) to be “naturalized.”

Among the implications of the naturalist thesis (as immediately described above) is that it is the task of the social sciences to find the laws governing society, no less than it is the task of the natural sciences to find the laws governing the natural world. Changing society, then, under this view, becomes a question simply of manipulating the relevant laws to achieve desired outcomes. Such a program typically goes under the heading of “policy.” For example, in the natural sciences, with a sufficient understanding of physics, one can build a bridge. More generally, a sufficient understanding of the laws of nature provides for the possibility of engineering. If, then, policy initiatives premised upon a naturalist thesis (explicitly or otherwise) are implemented, it may not be entirely surprising to find them referred to (sometimes disparagingly) as “social engineering.”

To be sure, insights into social laws can, in fact, allow a class of policymakers (typically represented in some fashion within the state) to create welfare-enhancing policies, improving social outcomes. Hence, the right policies can make meaningful and important social changes. Therefore, this model of “social science” described above (wherein the social sciences are modeled upon the natural sciences) is fruitful for welfare-enhancing social change.

And yet, one can detect from differing philosophical quarters a certain dissatisfaction with both this conception of social change and the philosophy of science on which it is predicated. At least three possible kinds of criticisms can be identified here. First, that it is elitist. It gives primary responsibility for changing society to a specific policymaking class,² while other agents in society become mere variables to be manipulated.³ Second, it is intellectually incoherent. To the extent that the social sciences can divine laws governing society, such laws should no less apply to the policymaking class.⁴ Joan Robinson (1970) succinctly captured both these criticisms as follows:

...even if the social sciences could improve their methodologies and raise their level of intellectual discipline, it would not be possible for them to provide a basis for social engineering similar to that which physicists have provided for space engineering... It is no use to explain people to themselves as if they were automata. “Every man hath business and desire.” The scientist cannot set himself up as a superior being who is

² See, e.g., Bowles (1974), who notes that the “liberal” approach to state power was to facilitate the “...isolation of the governing process from popular control, through the interposition of the expert between the electorate and the implementation of state action.” (p. 130) Bowles argued against this technocracy, advocating instead, in his position as a “radical economist,” that the proper task was to “...liberate ourselves from the view that beneficial social change can come through expert and enlightened advice to the powerful....” (pp. 131–132).

³ See Lawson (1997), who observes that exogenous variables in an economic model are manipulated by a “privileged policy-making elite” (p. 9).

⁴ Now, to be sure, this is indeed a strategy employed by some—i.e., to describe how laws governing society similarly govern the policymaking class attempting to manipulate social outcomes (this, for example, is the project of “positive political economy” in the manner of, say, a theory of regulatory capture or of public choice theory more generally). However, it comes with its own costs, to wit, it reduces further the space for conceptions of social change. For example, speaking of the “thrust for endogenization,” Reder (1982) notes that although “successfully to endogenize a new variable is to enhance the explanatory power of economics,” it simultaneously “must be noted that where variables are made endogenous, they are no longer objects of social choice” (pp. 33–34).

exempt from the operations of the laws he is expounding. The readers can retort to the writer—if we are automata, what are you? (Robinson, 1970, p. 120)

Lastly, the task of divining and describing social laws, even where such laws are held to apply only within certain institutional forms, often forgets the ways in which actors who behave *other* than in accordance with such laws do so precisely for the purpose of *altering* institutional forms, even if (or especially if) on smaller scales. For example, within the institutions of capitalism, throughout its history, marginalized groups attempt to (and often, with varying degrees of success, are able to) create nascent alternative economic practices. Such practices exist within and alongside of capitalist institutions. For example, contemporary “solidarity economy” practices can be regarded this way. That is, they are nascent non-capitalist alternative economic practices, growing and developing within capitalism itself. But to the extent that models of capitalist institutions predict certain kinds of (purportedly) optimizing self-interested economic behavior, any deviation from such behavior (such as practiced within the solidarity economy) needs to be accounted for and recognized. Failure to do so amounts to, in Lawson’s (1997) words, a denial of the “contribution of human beings to the active making of their own history” (p. 10).

These considerations allow for further reflection on our definition of naturalism above, in which we equated it with methodological monism—i.e., the claim that (i) the natural sciences serve as the model for the social sciences because (ii) the two have the same ontological content. Examining this definition further, we can note at least the theoretical possibility of distinguishing between (i) and (ii). That is, one can argue for the use of the natural sciences as a *formal model* for the social sciences without necessarily claiming that the latter also examines, ultimately, substances in the world that are ontologically “natural.” Similarly, one can argue that there is something substantively natural about (or within) the “social” world, without making any

commitments (or at least not explicit ones) regarding the methodology of the social sciences. The former I will refer to as “formal naturalism,” and the latter as “substantive naturalism.”⁵

I will reference these varying conceptions of naturalism in analysis of the texts below. For now, we may note that the objections leveled against “methodological monism” described above, concerning its implicit limited vision of social change, could just as well apply to either “substantive naturalism” or “formal naturalism” standing alone. This is evident enough regarding substantive naturalism; for, if certain features of the social world are understood as operating according to natural laws, and if such natural laws are not subject to change (insofar as natural laws are presumed to hold as true irrespective of any particular set of social institutions), then any such identified features of the social world are *similarly* not subject to change. Consequently, the potential for social transformation is cabined by the necessary character of such natural laws.

But objections regarding implications for conceptions of social change also arise with respect to formal naturalism. That is, even if we do not regard any particular set of social institutions as themselves natural, a conception of “social science” resting exclusively on the divination of laws *governing* those institutions (thereby creating the possibility for policy) still remains silent on the question of how agents constituting (and shaped by) those institutions act to *alter them from within*.

The question may also be considered from the perspective of the relationship between conceptions of the natural and the “necessary.” Both substantive naturalism and formal naturalism entail some conception of the necessary. In the case of the former, certain kinds of

⁵ A similar distinction is noted by DeCaro and McArthur (2010) in their discussion of “scientific naturalism” which they divide into an “ontological” and “methodological” component. The former they define as the claim that “the world consists of nothing but the entities to which successful scientific explanations commit us,” while the latter is defined as the claim that “scientific inquiry is, in principle, our only genuine source of knowledge or understanding” (p. 6).

social relations, laws, or properties (because they are, in fact, themselves determined by natural laws) endure as a matter of *necessity*, in the sense that they exist regardless of the particular form of social organization. The latter, in contrast, does not necessarily imply that some feature of society is natural (and hence exists necessarily, independently of specific institutional forms) but rather that, *given* certain institutional forms, certain outcomes obtain as a matter of necessity.

Accordingly, in the analysis of the texts below, one issue I want to address concerns these different concepts of “necessity” contained therein, and what implications they, in turn, hold for notions of social transformation.

1.2 The Natural as Normative: Justice as Immanent in Nature

As noted above, in addition to analyzing a positive dimension of “naturalism” we may also analyze a “normative” one. In particular, within the history of philosophy, and indeed within economics more specifically, one encounters the claim that something in the natural order of things provides for “justice.”⁶ Often, this notion goes under the heading of “Natural Law.” To avoid confusion, we should take care here to distinguish the normative concept of “Natural Law” from the positive concept of “laws of nature.” The latter might consist, for example, of 19th-century rational mechanics—which serves as the model of “natural science” for (as we shall see below) both Walras and Jevons. The former, however, are laws with which we—i.e., human agents, and the societies of which we are members—*ought* to conform. They differ from “laws of nature” then, in at least two respects: First, unlike the laws of social science, in the

⁶ This is not to say, however, that there could not be contrary connotations of the “natural” as well. It is quite possible, for example, to conceive of the natural as something brutal. See, e.g., Polanyi’s (1944/2001) discussion of Malthus, for whom “the repressive check” on the population arose from “the brute forces of nature” (p. 131). And, of course, there is Hobbes’ notorious description of the state of nature, in the absence of society, as “nasty, brutish and short” (Hobbes, 1651/1904, p. 84). Conceptions of the natural in these less merciful forms are, however, not considered in this thesis.

contemporary positive sense, they are not mere empirical generalizations describing, or even explaining, our behavior. They are edicts, injunctions, or obligations. Second, they apply only to humans and societies, since it is incoherent to expect any *obligation* to be imposed on a being that can make no *choice* to obey.

For a paradigmatic treatment of the conception of “Natural Law” we may look, briefly, to the work of Samuel Pufendorf. Squarely within the tradition, Pufendorf claims that the “natural law” can be found through the “light of man’s native reason and by reflection on human nature in general” (Pufendorf, 1673/2006, p. 32). Natural Law, then, is “natural” in the sense that it is “...congruent with the rational and social nature of man that there cannot be a good and peaceful society for the human race without it”(Pufendorf, 1673/2006, p. 32). That is, since we cannot have a “good and peaceful society” in its absence, and because there is a natural predicate for this fact (such predicate being the condition of our human nature) the resulting law is *imperative*; it is, thereby, in this specific sense, natural.

Hence does Pufendorf, through the “light of reason” and “reflection on human nature” attempt to adduce the natural law. Perhaps unsurprisingly, as a good Enlightenment thinker, among the precepts of natural law as he finds are those constitutive of a market economy. Such precepts include the duty to keep one’s promises in contractually made agreements, and the rights to private property; or, in the absence of the former, “we would lose most of the possible advantage in the mutual exchange of services and things” (Pufendorf, 1673/2006, p. 69). The latter similarly afford such advantages, since contractual agreements are themselves concerned with exchanges or allocations of property rights. Indeed, such rights, says Pufendorf, are not merely justified on utilitarian grounds but, rather (again, in the spirit of Natural Law theory) by “the will of God, with consent among men...” (Pufendorf, 1673/2006, p. 85).

This sort of analysis regarding the relationship between Natural Law theory and economic relations hardly remained within the exclusive jurisdiction of political philosophers. It was also influential in works we might more readily identify with the development of political economy as a modern science. As Ingrao and Israel (1990) argue, the positive and normative conceptions of law, while perhaps neatly analytically bifurcated in the contemporary mind, were not quite so distinct in the period of Enlightenment “social science.” Indeed, for many theorists of “social science” the entire basis for divining (as it were) the “laws” of society is to find, in reality, manifestations, or reflections, of *ideal* laws—i.e., of *normative* laws. Hence, a profound interest in “natural law” shapes the ostensibly purely positive science of discovering such “laws of nature” as are manifest in social settings. As Ingrao and Israel explain, “[t]he idea of law as regularity empirically deduced from the observation of the data of history or the customs and institutions of different peoples is, in fact, intertwined with a different concept of law as having normative rather than positive value and being totally independent of empirical observation” (p. 40).

At first blush, this “intertwining” may seem counterintuitive. After all, a positive law is a statement regarding that which, as an empirical matter, simply *is*, while a normative law is a statement regarding behavior to which we *ought* to conform. Neither on its own would seem to imply the other. The claim that they are nonetheless “intertwined” can be better understood, according to Ingrao and Israel, when we recognize that the determination of purportedly purely scientific laws in the social sciences is not *simply* an empirical matter. Rather, such laws are also understood and articulated on *deductive* grounds. In other words, they are understood as *following*, as matter of *logical necessity*, from certain premises. (And this, of course, should not at all seem strange to the ears of the contemporary economist, for whom model building, on an

edifice of axioms, is the foundational discourse.) In this sense, then, divining the laws of nature is well within the project of divining the “natural law,” at least insofar as both take place within the sphere of, and are indeed illuminated by, “the light of reason.”

Ingrao and Israel’s attempts to harmonize the natural and the normative notwithstanding, it is difficult to deny, at the least, a tension between the two. While “reason” and “deduction” may well be essential in the articulation of both kinds of laws, that alone would seem insufficient to bridge the gulf between “is” and “ought.”⁷ That is, it would seem nonsensical to make prescriptions, or impose obligations, regarding that which could not be otherwise. As Miller (1979) explains, where we are exclusively concerned with natural events, and not at least partly with the actions of “sentient beings,” it is incoherent to speak of justice or injustice:

Not every state of affairs can properly be described as just or unjust... It must... be a state of affairs which has resulted from the actions of sentient beings, or is at least capable of being changed by such actions. Thus although we generally regard rain as burdensome and sunshine as beneficial, a state of affairs in which half of England is drenched by rain while the other half is bathed in sunshine cannot be discussed (except metaphorically) in terms of justice... As long as a state of affairs is regarded simply as a product of natural causes, questions about its justice or injustice simply do not arise. (Miller, 1979, p. 18)

By endorsing Miller’s notion of the inapplicability of questions of justice to purely natural events, I do not mean to imply that there is no way to reconcile the simultaneous existence of “natural” and “normative” phenomena in the world. For example, Putnam (2016)

⁷ The attempt to bridge such a gulf can be traced, as Weinreb (1987) observes, back to the Greeks’ treatment of this dual conceptions of the “natural”—i.e., as something that both simply *is*, and which provides for just (or “deserved”) outcomes. Both are implied in the idea of the ancient Greek conception of the Natural Law: “The Greek solution to the problem of humankind’s place in the universe, variously expressed, and not without challenge, was the idea of a unitary normative natural order immanent in the cosmos to which human beings adhere in both their aspects. Even where they are free and self-determining, they fulfill the cosmic order; even when they are subject to the causal laws of nature, whatever befalls is according to that order and as it ought to be” (p. 1). Whether the Greeks’ “solution” was sufficient is a matter of debate. But the puzzle with which they were dealing is perhaps a timeless one: “The contradiction between freedom and cause... is more than a weakness in our moral understanding, on the one hand, or science, on the other. It is an antinomy, which cannot be overcome” (p. 9).

takes the view that we can be philosophical realists with respect to both sorts of phenomena, and that there is no need to reduce the latter to the former (or explain the latter in terms of the former).⁸ But this of course is quite a different matter from the question of whether we can speak coherently about the justice or injustice of a purely natural state of affairs. (This last claim will be particularly significant in our examination of Walras, who, as we will see, wants to make judgments about the “justice” of economic relations he simultaneously—albeit only partially, and in contradictory fashion—deems “natural.”)

1.3 Naturalism and “Mechanized” Agency

One last question to be explored below concerns the status of human agency. Above, I raised the question of the relationship between varying forms of “naturalism” and conceptions of social change. In particular, I suggested that various forms of naturalism fail to consider a vision of social change whereby agents, shaped by, and shaping, social institutions, come to act in a manner *other* than that described by the relevant governing social laws. One explanation for such failure, I will here suggest, is the adoption of an implicitly mechanical picture of agency. Indeed, and as is especially relevant to the project here of examining seminal neoclassical texts, one can find repeated criticisms of the representative neoclassical economic agent as excessively mechanistic. I will review several such examples in chapter 5, although we may note that we

⁸ DeCaro and Macarthur (2010) identify a range of philosophical positions they denote as “liberal naturalism” wherein, roughly speaking, the world, though partially explainable in terms of natural laws, need not be *solely* explicable in such terms. Additionally, at least one other possible position is to regard *both* the realms of the “natural” and the “normative” as nothing other than *interpretations* of the world. Such a position would be based on a rejection of realism. Instead, it relies on a Nietzschean “perspectivism” (wherein the very coherence of a claim regarding the reality of entities independent of interpretation is denied). Regardless, it is not my purpose here to canvass the wide variety of approaches to the question of the relation between the natural and the normative. I simply flag the issue here, as one frame through which I am reading the texts that follow.

observed one such example above, in Robinson's (1970) charge that mainstream economics treats persons as "automata."

If indeed the presence of a mechanized view of agency is a (partial) explanation for the absence of richer conceptions of social transformation, then an examination of the possible historical explanation for this view of agents as "mechanical" is warranted. Such an examination will be undertaken in chapter 5. Also of note here are the curious implications of mechanical agents for the theory of justice which informs Walrasian economics. That theory, as we will see in chapter 3, is predicated on political liberalism. But an agent that exercises liberty in a purely mechanical fashion surely does no favors for the optics of a theory of liberalism. One might anticipate, or at least hope for, a greater, worthier, hero of political liberalism's narrative. Hence does the contradiction between the mechanized agent and the paramount value of political liberty (both of which occupy a central space in neoclassical thought) similarly warrant an examination of the origins of the mechanized agent.

1.4 Walras, Clark and Jevons: Representations of Naturalism

With the theoretical architecture of various forms of "naturalism" before us, in both its positive and normative dimensions, we are now in a better position to approach the seminal neoclassical texts below. Briefly then, here, I want to situate the authors and these texts in relationship to this architecture.

I will begin, in chapter 2, with an examination of Walras. Walras' texts, we shall see, contain within them certain contradictions regarding the role of the "natural" and the "artificial" in markets. On the one hand, says Walras, markets are "artificial"—they are social institutions. As such, we may change them or not, as we see fit. On the other, exchange-value, itself a product of the market is, says Walras, a "natural fact." Indeed, further still, laws of the market are likened

to (if not explicitly deemed as substantively ontologically similar to) laws of nature. This, I will claim, is a contradiction in Walras' texts. Among other things, I analyze it as a form of commodity fetishism.

I then analyze the source of, or motivating force behind, that contradiction. In my view, it occurs because of a tension between Walras' two fundamental goals. First, Walras wants to argue that certain outcomes of the market flow as a matter of *necessity*. To justify this claim, he argues that certain features of the market are "natural." In other words, Walras articulates a substantive naturalism to ground his formal naturalism —i.e., he adopts the natural sciences as a model on the grounds that the natural and the social have (at least in part) the same ontological content. Secondly, Walras wants to render a *normative* evaluation of the market. Specifically, he wants to claim that competitive markets are *just*. However, in Walras' own view (as we suggested above), one simply cannot speak of "justice" regarding non-social phenomenon. More specifically, says Walras, we can only speak of justice insofar we concern ourselves with "persons," but not with "things." Hence Walras must explicitly acknowledge the *social* (i.e., "artificial") character of markets—and therefore is he led to *simultaneously* regard markets as *both* artificial *and* natural. This, in turn, I claim, gives rise to the implications of "naturalism" (with respect to both the question of social transformation, and normativity) as discussed above. Specifically, first, his naturalization of the market (in spite of his own claims regarding the institutions' artificial character) limits his view of social change, and, indeed, of "politics," to the manipulation of the market's purportedly inexorable laws. Absent from this view is a conception of the possibility of social transformation *from within*. Second, his desire to show that competitive markets *necessarily* yield "just" outcomes (discussed in chapter 3) leads him to conceive of the laws of the market in naturalist terms. That is, if the laws of the market are

conceptualized as (at the least) analogous to laws of nature, their consequences, including their consequences for justice, hold as a matter of necessity. Ironically, however, that very tendency to naturalize, though prompted (in part) by normative concerns, also puts such normative evaluations at risk.

We will then, in chapter 4, turn to John Bates Clark. Clark, as we shall see, is, on the surface, more careful in avoiding some of the inconsistency in Walras' system. In particular, Clark is careful to distinguish between "social" laws and "natural" laws, and never speaks of the facts of the market as *themselves* natural. And, like Walras, he too (and perhaps more famously, at least among English speakers) is driven by a normative vision—namely, the idea that there is no exploitation of labor, provided the existence of competitive markets. However, notwithstanding his seemingly greater analytical clarity, I will argue that he, too, tends to naturalize that which is social, at least in the sense of making the natural the *predicate* or *foundation* for the social. More specifically, though social laws and natural laws are separate categories, the latter *manifest* in the former, and nothing about the specifically *social* character of social laws serves to *alter* these (ostensible) "natural laws." That is, it is simply not imagined by him that the social world might *act back* on and *transform* the "natural." For example, the effects of increased wages in the labor market are, for Clark, fully predictable by the natural law of the diminishing marginal productivity of labor; the introduction of the social institution of wages in a market is not imagined by Clark to *itself* affect productivity. Nothing about the "social" world alters that which Clark deems "natural." All this follows from Clark's assumption that natural laws, simply because they are "natural," are thereby unchangeable, and hold as a matter of necessity, regardless of the specific social institutional form. In this sense, then, I claim, Clark subscribes to a kind of "substantive naturalism" (again, distinguished from

“formal naturalism”)—i.e., he imagines that social institutions do no more than reflect essential facts and laws of nature, without in turn acting back on such laws. Such a vision eclipses certain possible conceptions of a transformation of such purportedly natural economic laws, and hence, in turn, of a transformational politics. I illustrate such possibilities below with the examples of (1) the theoretical literature of minimum wage laws, and (2) the displacement of *homo economicus* through the reorganization of capitalist firms into cooperative enterprises. I conclude by briefly recounting certain critical appraisals of Clark’s substantive claims regarding justice in factor markets.

Lastly, in chapter 5, I will come to Jevons. Jevons, like Walras, adopts a form of methodological monism—though perhaps even more zealously than his continental counterpart. The ontologically similar content of the social and natural worlds, for Jevons, justifies the adoption of the natural sciences’ method in his political economy. Further still, Jevons takes the conception of nature as mechanism, found in 19th-century physics, and applies it not only to markets, but also to the economic agent himself. In reviewing the literature documenting this mechanization of persons we will discover two forms of Jevonian mechanization. The first lies in Jevons’ conception of the agent as a Benthamite physiological set of responses to pleasures and pains. The second lies in his view that thought itself can be fully represented as a mechanism—i.e., that a mechanized computer can engage in the same logical processes as can the human agent.

This vision, I claim, reinforces the limited view of social transformation that we find in Walras’ and Clark’s naturalistic conceptions of society. Hence, to open up the imaginative space for the possibility of social transformation from within institutions (as opposed to merely through the manipulation of laws), alternative, non-Jevonian, views of agency are needed. I will briefly

explore one such possible view in chapter 6: specifically, that articulated by Gibson-Graham. Gibson-Graham's analysis is useful in providing such an alternative insofar as she conceptualizes the simultaneous transformation and shaping of economic agents and the institutions in which they are situated, such that the posited (and typically naturalized) personage of *homo economicus* (with all its attendant laws) may give way to other forms of *dramatis personae* in economic life. Additionally, as revealed by the interviews conducted by Gibson-Graham, we will see not only the ways in which this alternative view of the subject can open up spaces for social transformation, but also the ways in which reified perceptions of economic relations as "natural" tends to frustrate those very capacities for self and social transformation. Hence, in my view, the importance of doing a (partial) history of this form of naturalism: while it purports to simply describe economic relations as unalterable in specific ways, in fact, it *creates* them as such, by functioning as an ideological obstacle to change.

First, though, and for the bulk of this thesis, we examine forms of naturalism in specific texts. I begin with Walras. Walras' work, we shall see, is especially rich, insofar as he (a) is a proponent of methodological monism; (b) tries to find a natural ground in economics to justify his monist approach; and (c) simultaneously wants to describe market institutions as "artificial" so he can coherently make a normative argument regarding whether they should or should not be changed (to conform to the requirements of "justice.") This need to describe the market (or aspects of the market) as simultaneously natural and artificial, leads to, I claim, irresolvable contradictions in his work. It is to those contradictions we now turn.

CHAPTER 2

WALRASIAN NATURALISM

It is sometimes said that the neoclassical school of economics “naturalizes” the market. More specifically, the neoclassical school is said to overlook the institutional character of markets. Instead, it treats them as perhaps a mere outgrowth of natural forces, or, regards them as secondary to the study of the universal man, *homo economicus* (see, e.g., Milonakis & Fine, 2009, p. 98); (Dixon & Wilson, 2012, p. 20). This is not the case, however, for one of the seminal thinkers in neoclassical thought, namely, Léon Walras. Rather, as we shall see below, Walras’ own relationship to this question is more complex. This chapter will articulate this complexity, and its implications. In particular, I will argue below that Walras’ claim that market processes govern a natural phenomenon (specifically, that of exchange-value) undermines both (a) his position that the market is “artificial,” and (b) his attempt at a normative evaluation of the market.

The procedure I intend to follow in addressing this issue is as follows. First, through textual exegesis,⁹ I will outline Walras’ explicit and conscious objection to any project defending market institutions as “natural.” Walras will be seen to have a sophisticated understanding of markets as a specific institutional form. Second, I will discuss what Walras sees as the stakes behind this question. For Walras, “naturalizing” the market would risk reducing persons to mere things, or objects. Since a distinction between persons and things is essential for Walras’ normative project, naturalization of the market is a conceptual route that must be foreclosed. Third, I turn to Walras’ claim that the market is properly understood in terms of “natural laws.”

⁹ Throughout this essay I will largely be relying on Walras’ *Elements of Political Economy* (Walras, 1969), though other texts will be relied on as well, including *Studies in Social Economics* (Léon Walras, 2010) and *Studies in Applied Economics* (Walras, 2005).

Specifically, Walras wishes to model his theory of “pure economics” on the theory of “rational mechanics,” which in turn was the dominant natural sciences paradigm in the 19th century.

The question I then pose is how it is possible for Walras to claim that the market is properly understood as “natural,” and governed by natural laws, while at the same time insisting upon its “artificial” character as institution. I will explore Walras’ own justification for this claim, which is primarily predicated on the view that “value in exchange” is a “natural fact” and, hence, that the laws governing value in exchange are properly understood as natural. I then claim that this argument is wanting. Exchange-value¹⁰ cannot be coherently defended as a natural fact. Walras argues that exchange-value depends on scarcity and that, since scarcity is natural, so too is value in exchange. My argument in response, in short, is: (a) scarcity (as defined by Walras) is not exclusively a natural phenomenon; (b) any view of it as such rests on a form of commodity fetishism; and, (c), even if it were granted for the sake of argument that scarcity is “natural,” it nonetheless only accounts for exchange-value if one already assumes into existence the background institution of private property. Hence, Walras’ argument naturalizes the very economic institutions that he otherwise is at pains to insist are, in fact, artificial.

My contention then is that Walras’ logic on this question is internally contradictory, and, further, that this contradiction is not resolvable on its own terms. Walras’ own insistence on the “artificial” character of institutions, and his normative reasons therefor, preclude the characterization of market laws, and exchange-values, as “natural.” Hence, Walras’ desire to characterize laws and facts of the market as natural merely overrides the contradiction. It does not solve it.

¹⁰ I use the terms “value in exchange” and “exchange-value” interchangeably in this essay.

I then suggest a possible explanation for this desire, in terms of his reliance on the natural sciences (in particular, 19th century physics) as the proper model for his newly proposed science of pure economics. Employing the natural sciences as the proper model allows Walras to draw necessary conclusions about features of the market. Just as, for example, the laws of gravity, coupled with specified initial conditions, yield, as a matter of necessity, certain results in the natural world, so too will Walras' proposed laws of the market yield certain results in the economic world.

In short, Walras' naturalism appears to be a species of "methodological monism" (as defined in the introduction.) That is, Walras, by arguing that the content of his "pure economics" is "natural," can thereby justify his selection of the natural sciences as the appropriate model. Furthermore, this implicit commitment to methodological monism provides Walras with the possibility of "applied economics," or economic policy –i.e., of shaping the economy through knowledge of its laws. But it is precisely because of this commitment that Walras' vision is subject to the very objections to the naturalist method discussed above. In particular, these objections run, Walras' vision of social transformation, apart from being elitist, and logically inconsistent (because, as discussed, there is no less reason to endogenize the business of policymaking than there is the objects of policy) precludes a vision of the transformation of social institutions from *within* – i.e., in and through the differing behaviors and choices of agents who, in Lawson's language, are actively contributing to the creation of their own history. We will have occasion to return to these criticisms at the conclusion of this discussion.

2.1. Walras: Anti-Naturalist

As noted above, though it is not uncommon to encounter charges that economists typically “naturalize” the economy, this is not the case for Walras (or, at least, not so purely and simply). At the outset of *Elements of Political Economy*, Walras takes issue with Jean-Baptiste Say (and with what he generally characterizes as the French school) for his definition of political economy. Say argues that “...the aim of political economy is to show the ways in which wealth is produced, distributed and consumed.” (quoted by Walras, 1926/1969, p.54). Walras objects to Say’s definition at least insofar as it suggests that “...the *production, distribution and consumption* of wealth take place, if not spontaneously, at least in a *manner* somehow independent of the will of man, and as though political economy consisted *entirely* of a simple exposition of this manner of production, distribution and consumption.” (Walras, 1926/1969, p. 54, emphasis in original) Walras goes on to note that there was always something “convenient” (Walras, 1926/1969, p. 55) about such a view, in that it supports a particular kind of *political* argument. Notably, it allowed Say and other critics of socialism to argue that a “laissez-faire” system, because natural, was also necessary or inevitable. Such a position allowed Say (and others) to avoid arguing in favor of markets on either normative or pragmatic grounds. As Walras explained:

What has proved so pleasing and at the same time so misleading to economists in this definition [as set out by Say] is precisely its characterization of political economy as a natural science pure and simple. Such a point of view was particularly useful to them in their controversy with the socialists. Every proposal to reorganize production, every proposal to redistribute property was rejected *a priori* and practically without discussion, not on the grounds that such plans were contrary to economic well-being or to social justice but simply because they were *artificial arrangements designed to replace what was natural*. [emphasis added]...this naturalistic viewpoint was inspired by the formula *laissez faire, laissez passer* ...Such an attitude led Proudhon to hurl the epithet *fatalistic* at this school of economists. (Walras, 1926/1969, pp. 55-56)

Walras will have none of this. Such a position ignores the ontologically distinct status of the human will. This distinctive fact alone is sufficient (says Walras) to conclude that market arrangements are not merely “natural.” If we had no free will, human history would be nothing other than mere natural history. But it isn’t. It is something more:

Unfortunately, convenient as this point of view is [regarding the natural status of markets], it is mistaken. If men were nothing more than a superior species of animal, like bees that live and work together instinctively, then, to be sure, the description and explanation of social phenomena in general and of the production, distribution and consumption of wealth in particular would be a natural science. Indeed, it would be a branch of natural history, viz, the natural history of man, a sequel to the natural history of bees. But this is not the case at all. Man is a creature endowed with reason and freedom, and possessed of a capacity for initiative and progress. (Walras, 1926/1969, p. 55)

This last point—i.e., that humankind occupies a moral universe, and that we are, accordingly, beings with free will, endowed with reason—is of particular importance to Walras. Accordingly, he sets out a distinction between “persons” and “things” as follows:

The fact that man's will is cognitive and free makes it possible to divide every entity in the universe into two great classes: *persons* and *things*. Whatsoever is not conscious of itself and not master of itself is a thing. Whatsoever is conscious of itself and master of itself is a person. Man, being both self-conscious and self-directed, is a person. Man alone is a person; minerals, plants, and animals are things. (Walras, 1926/1969, p. 62)

Hence, argues Walras, because human beings are persons, and not mere things, they cannot be analyzed simply as one would the objects of a natural science. Natural phenomena (the world of things) and human phenomena (the world of persons) are ontologically distinct:

...we may divide the facts of our universe into two categories: those which result from the play of the blind and ineluctable forces of nature, and those which result from the exercise of the human will, a force that is free and cognitive (Walras, 1926/1969, p.61)

Therefore, the essential difference between the natural and social world, he argues, is that natural forces are “blind and ineluctable”—i.e., they are necessary—whereas facts that result from the human will *could have been otherwise*. Precisely because the nature of human will is

such that it permits *mastery* of one's actions, those actions can *vary* or can be *directed*. As Walras writes, "...the human will, being free and cognitive, at least up to a certain point is capable of receiving advice, of having such and such a course of action prescribed to it, and of being directed." (Walras, 1926/1969, pp. 61-62)

Such passages seem to indicate an unequivocal opposition to any naturalistic modeling of the social world. Such a project would undermine the notion that we inhabit a normative (and not merely naturalistic) universe. And this, according to Walras, is precisely the effect of Say's "naturalistic" view of political economy, since it overlooks our capacity to normatively evaluate, and collectively *choose* amongst, alternative economic institutions. Hence, if our choice to embrace a "laissez-faire" system is to be justified, it cannot be done so on grounds of its purported "naturalness." It must instead be on normative grounds. We must decide such a system to be *superior* to alternative systems:

In the production and distribution of wealth, and generally in all matters pertaining to the social organization, man has the choice between better and worse and tends more to choose the better part. Thus man has progressed from a system of guilds, trade regulation and price-fixing to a system of freedom of industry and trade, i.e., to a system of laissez-faire, laissez-passer; he progressed from slavery to serfdom and from serfdom to the wage-system. The superiority of the later forms lies not in their greater naturalness (both old and new are artificial, the newer forms more so than the old, since they came into existence by supplanting the old); but rather in their closer conformity with material well-being and justice. The proof of such conformity is the only justification for adhering to a policy of *laissez-faire, laissez-passer*. Moreover, socialistic forms of organization should be rejected if it can be shown that they are inconsistent with material well-being and justice. (Walras, 1926/1969 p. 55)

Thus does Walras argue that the market is “artificial” because *any* form of economic organization is artificial — i.e., because all such forms are *social*. It is something that can be changed (i.e., we can “choose” it.) Nothing about it is “necessary” or “ineluctable.” Say’s appeal to “nature,” in order argue that there is something necessary and ineluctable about the market, is, therefore, mistaken. Instead, if we are to defend a market economy we must do so on the grounds of its close “conformity” with “well-being” and “justice.” This is, therefore, the explicit nature of Walras’ project: to argue that a competitive¹¹ market economy conforms to the requirements of material well-being and justice.¹²

2.2. Walras: Naturalist

Notwithstanding Walras’ argument that the market is not to be understood as a natural phenomenon, the very same Walras simultaneously makes an argument that, at least on the surface, stands in direct contradiction—namely, that a scientific approach to the “economy” relies on a conceptualization of it as operating in accordance with natural laws. Specifically, Walras was engaged in a project to model his “economics of pure political economy” on Newtonian mechanics. In a 1901 letter, Walras wrote of the inspiration for this project, as prompted by reading Louis Poinsoot's *Elements de Statique*: "I opened the Statique of Poinsoot one

¹¹ Admittedly, the passages cited above do not discuss the requirement of a “competitive” market. However, as we shall see below in section V, competition is, for Walras, a necessary condition of “well-being” and “justice.”

¹² Indeed, Walras’ three major works can be seen as tracking precisely this tripartite distinction. His *Elements of Pure Economics (EPE)* is intended to be a formalistic treatment of a market economy; his *Studies in Applied Economics* discusses the application of economic principles as articulated in *EPE* for the purpose of furthering material well-being; and *Studies in Social Economics* concerns itself with normative evaluations of differing economic institutions. Of the three, only the first is realized in its intended form, i.e., as a complete treatise. The other two were each assembled by Walras as a collection of essays, and recently translated by van Daal, and van Daal and Walker, respectively.

evening...and that theory of equilibrium achieved through the linking and unlinking of forces and of connected elements seemed to me so luminous and so straightforward that I read half of it in one sitting. The next day, I finished off the second half" (as translated by Walker, 2006, p. 5).

Ingrao and Israel (1990) have argued that he took "...the conception and framework for his equations of general equilibrium...from the second chapter..." of Poinso's *Elements*, entitled "On conditions of equilibrium expressed by means of equations" (p. 88). The inspiration thus drawn carried him to embark on the creation of:

...a new science: the science of economic forces analogous to the science of astronomical forces. I cite astronomy because it is in fact the type of science like which, sooner or later, the theory of social wealth ought to become. In both there are natural facts, in the sense that they remain superior to social conventions and that they impose themselves on the human will; laws equally natural and consequently necessary, some of principle importance, few in number, the others secondary, quite numerous, varied and complex; facts and laws suitable for an extensive and fruitful application of calculus and mathematical formulas. The analogy is complete and striking (Letter of 1862 as translated by Walker, 2006, pp. 5-6)

Walras' commitment to creating a science of economics modeled not just on astronomy, but on rational mechanics generally, appears throughout his work. For example, in "Economics and Mechanics," Walras writes that the "procedure [of pure economics] is rigorously identical to that of two of the most advanced and uncontested physico-mathematical sciences, *rational mechanics* and *celestial mechanics*" (Cook & Mirowski, 1990), p. 206; emphasis in original). Similarly, in "Of Man and Society" (appearing in *Studies in Social Economics*) he writes: "The laws of the social relationships men have relative to one another can and must be of the same character of scientific truth as that of the laws of the gravitational relationships among the celestial bodies" (Walras, 2010. p. 95). Again, in "Present State of Economics and Social Science" (also appearing in *Studies in Social Economics*) he writes: "When I say...that things tend to increase or decrease in value according to whether their quantity demanded decreases or

increases in comparison with their quantity supplied in the market, I am stating a law *of the same order* as when I say that bodies tend to fall into the direction of the centre of the earth with a speed increasing in time” (Walras, 2010, p. 23). Once again, in *Elements of Pure Economics*, he proclaims that: "The pure theory of economics...is a science which resembles the physico-mathematical sciences in every respect" (Walras, 1926/1969, p. 71).

On the surface, there is at least evidence of a contradiction here. How to model a science of economics on the natural sciences when human beings are (as we saw Walras insist upon) *persons* and not *things*? How could one and the same person champion the ontologically distinct character of human beings as existing over and above mere natural forces, in virtue of their reason and free will, and then commit himself to the proposition that the laws of the economy are akin to the laws of nature?

There is, it appears, little scholarship addressing this seeming contradiction within Walras' texts. Roughly speaking, one can, within the history of economic thought, discern two kinds of Walrasian scholarship. First, there are Walras' detractors who are critical of Walras' (allegedly) naïve embrace of rational mechanics as the proper model for the "economy" (see, e.g., Mirowski, 1989). Second, there are his admirers (including Jaffé, Walker, and van Daal) who, though they are generally cognizant of Walras' admiration of the rational mechanics model, as well as of his normative commitments (entailing a commitment to a view of justice that, *inter alia*, relies on a rigorous distinction between "persons" and "things"), seem to pass by unaware of any potential tension between the two.

Among the few authors who take up this tension explicitly are Ingrao and Israel (1990), who discuss the relationship between Walras' normative commitments and his "mechanistic" view of this newly-discovered phenomenon called "the economy." As they put the matter, the

question is one of the “historiographical problems...raised in late Enlightenment culture by the simultaneous presence of a normative viewpoint and the inspirational model of mechanics” (p. 99). Ingrao and Israel go on to credit Walras with perhaps being “...more aware than his modern interpreters of the need for a synthesis” (p. 100). Indeed, he may well have been. But the question is whether he in fact achieved one. Ingrao and Israel suggest that he was successful in doing so. But this remains unclear. How exactly does Walras reconcile the demand for the moral universe inhabited by human beings (as social beings) with the imperative to describe such a universe mechanically? Here is Ingrao and Israel’s solution:

The autonomy of ethics, according to the point of view of the purely rational truth of justice, is stressed precisely in order to guarantee the legitimacy of constituting as a physicomathematical science the one autonomous sphere of the determination of exchange-values in a market of perfect competition. Such an autonomous sphere enjoys a particular epistemological status that makes possible, and even demands, analogy with mechanics and astronomy (p. 100).

This solution strikes me as far too cursory. Ingrao and Israel never explain precisely how the “autonomy of ethics” provides the “guarantee of legitimacy” to constituting the determination of exchange-values along naturalistic lines (i.e., of constituting it as a physicomathematical science), nor what makes the sphere of the determination of exchange-values “autonomous,” nor what is “particular” about that sphere’s “epistemological status” that “demands analogy with mechanics and astronomy.” Nor is it sufficiently explained how the two spheres could be “autonomous” when the domain of the “ethical” sphere is precisely that of the justice of the “market,” i.e., of the sphere in which exchange-values are determined. There simply is not, in my view, sufficient attention (paid by Ingrao and Israel) to the question of how economic laws could be deemed natural when the economic system (by Walras’ own definition) is deemed artificial.

The matter can be explored in a similar manner using the conceptual scheme for Walras' work outlined by van Daal, in his introduction to *Studies in Applied Economics* (Walras, 2005). van Daal argues that Walras imagined that the sciences in general can be categorized as follows: (1) pure natural science; (2) applied natural science; (3) pure moral science; (4) applied moral science. van Daal here relies on a passage from *Melanges d'economique politique et sociale* wherein Walras explains that "pure science establishes facts and relations [while] applied science prescribes rules of conduct" (Walras, 2005, p xxi). Hence do the "pure natural sciences" study "facts and relations which have their origin in the play of the fatal forces of nature" while the "pure moral sciences" study "facts and relations originating from the exercise of man's free will." Applied natural sciences, meanwhile, prescribe "rules of conduct for man vis-à-vis impersonal things" while applied moral sciences prescribe "rules of conduct for people vis-à-vis each other" (Walras, 2005, p. xxi). Thus does van Daal propose the following figure to represent this scheme:

		<i>Sciences</i>	
		Pure	Applied
<i>Object</i>	Nature	Pure Natural Sciences	
	Persons vis- a-vis nature	Pure Moral Sciences	Applied Natural Science
	Persons vis- a-vis persons		Pure Moral Science

Figure 2.1. van Daal's scheme of Walras' Classification of Science. From Walras, 2005, p. xxi

(The upper right corner is empty because, as van Daal notes, it is nonsensical to outline prescriptive, as opposed to merely descriptive, rules for relationships among natural objects.)

Applied to Walras’ understanding of economics, van Daal then suggests the following scheme:

<i>Object</i>	<i>Sciences</i>		
		Pure	Applied
Nature	Pure Natural Economics		
Persons vis-a-vis nature	Pure Moral Economics	Applied Natural Economics	
Persons vis-a-vis persons		Pure Moral Economics	

Figure 2.2. van Daal’s scheme of Walras’ Classification of Economics. From Walras, 2005, p. xxvii

Once more mapping on to the above Walras’ three main works (discussed above), we have, according to van Daal:

<i>Object</i>	<i>Sciences</i>		
		Pure	Applied
Nature	Elements of Pure Economics		
Persons vis-a-vis nature	Studies in Social Economics, Part I	Studies in Applied Economics	

	Persons vis-a-vis persons		Studies in Social Economics, Parts, II, III, and IV
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Figure 2.3. van Daal’s scheme of Walras’ Three Main Works. From Walras, 2005, p. xxviii

For our purposes, the point of interest is the upper left box in figures 2.2 and 2.3. If indeed pure economics is to be construed as a pure natural science, then it would appear that persons disappear. According to van Daal’s scheme, the object of study of pure economics is nature, not persons. But this of course threatens to undermine the very person/thing distinction we saw Walras articulate above, upon which his normative project (and, indeed, his economic and philosophical project as a whole) crucially depends. That is, in the absence of such a distinction, his criticism of J.-B. Say and “French school” is at risk.

2.3. Walras and Exchange-Value

Further examination of Walras’ texts is necessary if we are to find some hope of discovering a coherent, internally consistent reading of the seeming contradiction above (i.e., his apparent simultaneous rejection and embrace of a naturalistic conception of “markets.”) In this section, I set out Walras’ justification for claiming that the market is governed by natural laws. As it turns out, such justification is relatively straightforward. Walras claims that the laws of the market can be construed as “natural” because “value in exchange” is a “natural phenomenon” (Walras, 1926/1969, p. 69). But this of course simply begs the question of precisely what is “natural” about exchange-value. Walras’ answer is that the determinants of exchange-value (which in modern parlance we would render “supply and demand”) are themselves dependent on the natural properties of a commodity. I turn here to the reasoning behind this claim.

At the beginning of “Lesson 3” in *Elements of Pure Economics*, Walras argues that a thing has the property of “value in exchange” only if it is a form of “social wealth.” “Social wealth” in turn, consists of only such things that are “scarce.” Scarcity is then in turn defined in terms of two distinct components—i.e., a “scarce” good is that which is both (1) useful, and (2) limited in quantity (Walras, 1926/1969, p. 65). By “useful,” Walras means simply that a thing (whether material or immaterial) satisfies a want. The question of the particular kind of want is irrelevant, whether it be “necessary, useful, agreeable, or superfluous.” So long as something is desired, regardless of the reason, the thing is “useful.” Walras then defines “limited in quantity” to mean such things as “do not exist in such quantities that each of us can find at hand completely to satisfy his desires” (Walras, 1926/1969, p. 65). Examples of goods that (by this definition) are “unlimited” include “atmospheric air, the light and warmth of the sun in daytime, and water, which exists in such quantities in lakes, rivers and streams, that no one need go without; everyone can take as much as he wishes from the water’s edge” (Walras, 1926/1969, p. 65).

Now, once something is seen to be both “useful” and “limited in quantity” it follows, according to Walras, that it is “appropriable”¹³ (Walras, 1926/1969, p. 65). Both conditions must be met for a thing to be appropriated. If it were not “useful” (if no one wanted it), no one would bother to appropriate it. If it were “unlimited,” then it would likewise not be “appropriated” since “unlimited” objects exist “in the public domain” and are “sufficiently at hand.” Hence, deriving utility from them does not require any appropriation. (And trying to sell them for profit would be futile, since there would be no buyers) (Walras, 1926/1969, p. 66).

¹³ Whether something is appropriable, and whether it is actually appropriated, or, rather, appropriated by *individuals* (rather than collectively), is a distinction not considered by Walras in the third lesson. He takes it up, rather, in the fourth; and we will return to it in section V below.

The final step of the argument for Walras is to connect the phenomenon of “appropriation” with that of “value in exchange.” Specifically, Walras claims that, once all scarce things are appropriated, the only manner in which an individual can obtain scarce things that he or she has *not* appropriated is to *exchange* what they have:

An individual owning any one of these scarce things can, by giving it up, acquire some other scarce thing which he lacks. He can get what he does not possess only on condition that he surrender some other scarce object which he has in his possession. If he has nothing to give in exchange, he will have to do without which he lacks. Such is the phenomenon of *value-in-exchange*... (Walras, 1926/1969, p. 67).

The argument for Walras thus far then, is: a thing is appropriated only if it is useful and limited in quantity (since the presence of both makes a thing appropriable, and the absence of either makes appropriation futile); and, once something is appropriated, it acquires the property of having exchange-value. Hence, says Walras, exchange value ultimately depends upon a thing’s usefulness and limitedness.

But this is all prelude to Walras’ ultimate point, i.e. the *naturalness* of value-in-exchange. To make the claim that value-in-exchange is natural, Walras must argue not merely that value-in-exchange depends on “usefulness” and “limitedness;” he must (in his view) further argue that “usefulness” and “limitedness” are *themselves* natural. And this indeed is what he claims, stating “...any value in exchange, once established, partakes of the character of a natural phenomenon, natural in its origins, natural in its manifestations, and natural in its essence. If wheat and silver have *any value at all*, it is because they are scarce – that is, useful and limited in quantity, both of these conditions being natural. If wheat and silver have a *definite value* with respect to each other, it is because they are, each of them, more or less scarce, that is, more or less useful and more or less limited in quantity – again, the same two natural conditions mentioned above” (Walras, 1926/1969, p. 69). We can see here then that the claim regarding the natural status of

exchange-value is unequivocal. And the reason is that to be “limited in quantity” and to be “useful” are, according to him, “natural conditions.”

Walras does not, however, give any further argument for the proposition that these two conditions are “natural.” And, unfortunately, it is difficult to construct one on his behalf. Firstly, it simply is not the case that the “limited” quantity of any particular good is a function of its natural properties alone. The state of technology, for example, will alter the quantity. Now, it may be possible to interpret Walras as saying that it is the *nature* of the good that places it in the “limited” or “unlimited” category. That is, Walras may be saying, while technology can of course increase production of a commodity, it cannot turn a “limited” good into an “unlimited” good. And yet, artificial (i.e., man-made) conditions can render an “unlimited” good “limited.” While his examples of air and water suggest that it is the nature of goods that might render them “unlimited” once and for all, we know already that, for example, increases in pollution could render them “limited.” Hence the emergence of a market in bottled water.¹⁴ And, in the future, it is not entirely inconceivable that, as it becomes “scarcer,” we find ourselves with a market for air.¹⁵ Walras’ own comment that we would not expect such things to happen under “normal” conditions itself indicates the possibility that so-called “extraordinary” conditions could *become* normal, given sufficient “intervention” in nature by “man.” That is to say, a good is not “limited” or “unlimited” based simply on “natural” conditions only.

If Walras’ argument to the effect that it is exclusively natural conditions that determine whether or not (and the extent to which) a good is “limited” is not terribly persuasive, his

¹⁴ Of course, this could occur even with a perceived increase in pollution. “Clean” water can be perceived as “scarce” even apart from the natural conditions of the water.

¹⁵ In December 2015, several news outlets reported that a start-up company, initially as a joke, bottled Canadian air, just to see if there was any demand. They were able to sell 500 bottles of their air to customers in China within two weeks for up to \$20/bottle (see, e.g., Risen 2015).

argument that “usefulness” is a “natural” condition is even less so. Desires are never exclusively predicated on the natural properties of the object of desire. Desires are socially and culturally constructed. That is, desires are based on the *significance* or *meaning* of the desideratum (and not merely on its material properties). As Douglas and Isherwood (1996) argue, goods “are needed for making visible and stable the categories of culture” (p. 62). This is not to deny that some goods have the specific function of sustaining us biologically. But it is nonetheless to say that *all* goods, even such goods as have this explicit “material” function, also serve to construct a world of meanings. Hence, under this view, the “Cartesian dichotomy between physical and psychic experience” is “dissolved” (p.73). Or, as Jhally (1990) put the matter, “the recognition of the fundamentally symbolic aspect of people’s use of things must be the minimum starting point for a discourse that concerns objects. Specifically, the old distinction between basic (physical) and secondary (psychological) needs must be superseded” (p. 4).

2.4. Walrasian Commodity Fetishism

Walras’ argument above is perhaps most intelligibly interpreted as a form of commodity fetishism. Marx famously argued that it is a characteristic mistake of the “economists” to regard the exchange-value of a commodity as somehow a natural property of the commodity itself, when, rather, it is a function of the relationship between laboring producers of commodities. We will not here attempt to give a defense of Marx’s labor theory of value (which Walras disputes.)¹⁶ The present point is merely that the Marxian conception of commodity fetishism is useful for understanding Walras’ error. Even if we were to reject a Marxian labor theory of

¹⁶ Walras argues against both a classical and Marxian labor theory of value in various places, usually in the context of defending his theory of exchange-value as determined by “raretee.” See, e.g., *Theory of Property* (Walras, 2010, p. 137).

value, and accept a Walrasian theory of exchange-value, a view of the latter which fully appreciated the role of social institutions (as Walras himself appears to urge) would lead us to conclude that exchange-value derives from the *relationships* economic agents enter into with each other (again, even if we ignore for present purposes the Marxian insight that such agents are entering into relations with one another as laborers)—i.e., the very market relationships which Walras elsewhere acknowledged as artificial, but now, in order to advance his case for “science” of economics, alike in every respect with the “natural sciences” of his time, conveniently now forgets.

One difficulty in applying Marx’s form of commodity fetishism analysis to Walras’ theory of exchange-value is that it is not exchange-value fetishism pure and simple. Rather, we might argue, it is simultaneously an “exchange-value” fetishism *and* a “use-value” fetishism. Sherman (Sherman, 2014) for example, speaks of the error of attributing the use-value of a commodity entirely to its natural properties as a “...potential fetishism of use values that runs parallel to the fetishism of exchange values” (p. 148). To argue in favor of a conception of “use-value” fetishism, we may draw on Marx’s conception of fetishism more generally, well-described, I think, by Jhally (1990) as follows:

What does it mean to ‘make a fetish’ of something in this context? It means to invest it with powers it does not have in itself. It is not that we see powers in things which are not present (that would be pure illusion), but rather that we think the powers a product does have belong to it directly as a thing, rather than as a result of specific human actions that give it the power in the first place....it is to *naturalize* a *social* process. (pp. 28-29)

Drawing on this definition, we may I think justly say that Walras has fallen into a form of use-value fetishism, precisely by attributing the desirability of an object to its natural properties. But note that, because Walras explains exchange-value in terms of use-value (as does contemporary Walrasian economics) his use-value fetishism *leads him* into a form of exchange-

value fetishism. That is, it is because he sees the desirability of an object as residing in its natural properties, and because such desirability partly constitutes its exchange-value, that he is led to conclude that exchange-value is itself a natural property of an object. And yet, as should be evident by now, it is no such thing.¹⁷

2.5. Exchange-value, appropriation, and private property

But what if it were? What if the “usefulness” of an object could be said to reside in the natural properties of the object itself? What if, that is, we were to *grant* this position, simply for the sake of argument? Would this save Walras’ claim that exchange-value is a natural property? It appears, on the basis of Walras’ own logic, that it would not. Instead, such natural conditions could at best be said to serve as a necessary condition for the phenomenon of exchange-value; sufficient conditions would include the “artificial” institution of the market. This becomes clear on further investigation of Walras’ discussion of “appropriation.”

Recall that we saw above how, for Walras, only things that were “limited in quantity” and “useful” were “appropriable.” However, as Walras himself insists, more than one form of appropriation is possible. Private property, of course, is one possible form. But so is collective property (in Walras’ terms, “individualism” and “communism”, respectively.):

From the very beginning of human society and from the first appearance of social wealth, the problem of the distribution of this wealth has been subject to debate.... Of all the systems of distribution which have ever been devised, the two most prominent are

¹⁷ Although Marx himself critiqued the specific concept of fetishism of exchange-value, he said nothing about the fetishism of use-value. In fact, a reading Marx’s comments on use-value might suggest that he too subscribed to a kind of fetishism of use-value, since he seemed to regard use-value as being a simple function of the natural properties of a thing (in claiming, for example, that “usefulness...is limited by the physical properties of the commodity...”) (Marx, 2004) However, since, for Marx, use-value did not *explain* exchange-value (even if it was a necessary *condition* for exchange-value) any purported use-value fetishism on his part did not simultaneously carry over into the world of exchange-value. Not so, however, for Walras, for whom exchange-value increased (decreased) precisely as “usefulness” increased (decreased.)

communism and individualism, which have had as their respective champions the two greatest minds of antiquity, Plato and Aristotle. (Walras, 1926/1969, p. 78)

And neither of these systems of distribution, says Walras, is natural. Indeed, *any* system of appropriation is a pure “human contrivance” and is to be arrived at through a collective—i.e., social—decision:

The appropriation of scarce things or of social wealth is a phenomenon of human contrivance and not a natural phenomenon. It has origins in the exercise of the human will and in human behavior and not in the play of natural forces. It is surely not within our power to make useful things unlimited in quantity appropriable, or to make useful things limited in quantity inappropriable. But once the conditions of appropriation are fulfilled in the nature of things, it is within our power to determine whether this appropriation shall be carried on in one way rather than another. Obviously this power does not reside in each of us individually but in all of us taken collectively. We are dealing here with a human phenomenon that is shaped, not by the separate will of each individual, by the collective activity of society as a whole... While nature makes things appropriable, mankind determines and carries out the appropriation... (Walras, 1926/1969, p. 76)

Furthermore, precisely because such phenomena (of appropriation) are not natural, they are to be evaluated normatively, i.e., according to principles of justice:

Appropriation being in essence a moral phenomenon, the theory of property must be in essence a moral science.... If any science espouses justice as its principle, surely it must be the science of the distribution of social wealth... (Walras, 1926/1969, p. 79)

Hence is any particular form of appropriation—i.e. the economic system, and the property arrangements underlying it—a matter of choice, and subject to evaluation based on principles of justice. Private property is only one possible form. And yet, the very exchange-value that Walras insists on characterizing as “natural” is dependent on only this *particular* form of appropriation, i.e., private property. For it is precisely because of private property that, as Walras observed, a person must “do without” that which he does not, if he has nothing to offer in exchange (Walras, 1926/1969, p. 67). Indeed, if we return to Walras’ argument connecting

scarcity and “value-in-exchange” by means of “appropriation,”¹⁸ we see there that Walras himself has implicitly assumed private property as a background condition. The relevant passage, again, reads:

An individual owning any one of these scarce things can, by giving it up, acquire some other scarce thing which he lacks. He can get what he does not possess only on condition that he surrender some other scarce object which he has in his possession. If he has nothing to give in exchange, he will have to do without which he lacks. Such is the phenomenon of *value-in-exchange*... (Walras, 1926/1969, p. 67)

Thus does Walras’ own argument deriving exchange-value from “scarcity” assume the very institution of “individual ownership” – i.e., of private property. Hence, even if we were to grant that “scarcity” is a (purely) natural condition, it does not follow that “exchange-value” itself is also natural, simply because it depends on a particular “manner of appropriation” (i.e. private property) which Walras himself claims is to be determined by “human will” (Walras, 1926/1969, p. 76). Insisting that exchange-value is “natural in its essence” would therefore appear to naturalize the institution of private property—precisely what Walras otherwise is adamant about avoiding. Hence is his distinction between natural phenomena and phenomena subject to human will, so essential for his philosophical system (as we saw in Section 2.1), undermined by the naturalization of exchange-value.

2.6. Methodological Monism and Baconian Politics

We appear to need, then, an explanation for Walras’ simultaneous repression and elevation of the role of institutions. That is, whence the insistence that his newly-discovered science of “pure economics” properly regards exchange-value as a natural phenomenon, and that, accordingly, the laws of the market are “natural?” In my view, as suggested above, such an

¹⁸ See discussion above at p. 42

explanation turns on Walras' apparent fascination with the possibility that such a science would allow him to reach *necessary* conclusions. Again, in his letter of 1862, he writes that we find in the "science of economic forces...laws equally natural [to that of astronomy] and *consequently necessary*" (Walker, 2006, p. 6). That is, construing pure economics as the study of natural laws justifies his method, i.e., of proving or formally demonstrating certain conclusions as a matter of necessity. In short (using the language adopted in the introduction), Walras seems committed to the principle of methodological monism – i.e., the thesis that content of the social world is the same as (or sufficiently similar to) that of the natural world, such that the same method is warranted.

And yet, Walras' reasoning here betrays a fundamental error, since there is a critical distinction between whether *laws themselves* are necessary and whether *given the existence of laws*, themselves predicated on background *institutions*, certain economic facts follow as a *necessary consequence* of such laws. Given Walras' wording above, he appears to claim the former. But we know by now of course that such a position is inconsistent with his view that economic institutions are "artificial" (i.e. social).

To the all of the above, one might object as follows: surely Walras' meaning is clear. The question of the form of economic system (set of institutions) is a normative question, since, through the capacities of human will, we can choose and refashion such institutions. However, given the institution of the market system, certain necessary, determinate conclusions can be drawn. For example, that in a competitive simple exchange economy, each consumer will maximize utility where the ratio of the prices equals the ratio of the marginal utilities. Or, that in a competitive market economy with production, price will equal marginal cost. Or one can even draw normative conclusions (with the addition of a theory of justice), namely, that any such

point of individual utility maximization (or of marginal-cost pricing) will represent a point of “justice in exchange.” Even if it seems clear that none of these facts are “natural,” they may very well be “necessary” at least given the market institutions in which they are situated. That is, one might argue, Walras’ error is merely to assume that, in order to draw “necessary” conclusions, he must assume the existence of “natural” laws, whereas all he needs to do is to assume the existence of social laws, i.e., the laws of an institution (the market.)

In Walras’ time, however, the project modeling of a new “pure economics” on the natural sciences was novel (hence Walras’ efforts to justify such a project in such works as “Economics and Mechanics” discussed above.) It would therefore not be surprising if Walras regarded it as necessary to find some ontological similarity between “society” and “nature” in order to ground the methodological modeling of the newly-invented “social sciences” on the natural sciences. Nowadays, of course, no one feels compelled to make such an argument. Economic laws need not have a “natural” predicate. Put otherwise, in the language we proposed in the introduction (one might argue) the adoption of a “formal naturalist” position need not necessarily entail one of “substantive naturalism.”

We can further see Walras’ tendency to conflate the use of the natural sciences as a kind of formal model for his newly-proposed “pure economics” (i.e., “formal naturalism”) with the requirement that “economics” have an ontological natural predicate (i.e., “substantive naturalism”) reflected in his discussion of the Baconian conception of the sciences. Recall above we observed that the importance, for Walras, of distinguishing between “persons” and “things” was that the former (unlike the latter) can fashion institutions according to their will. And yet such an ability, notes Walras, is not limitless. It is bounded; and precisely so, he says, by “natural laws.” Walras approvingly cites Bacon’s conception of man’s manipulation of nature, according

to which “*Homo naturae non nisi paretur imperat*” [Man commands nature only by obeying it].

Walras argues that this principle “applies as much to politics as civil engineering.” He explains:

In both areas there are natural forces and the human intellect. The human mind must understand the natural forces in order to obey, and obey in order to command them. But, in fact, mankind commands them by making them work towards the goal he has in mind, and that is why imagination is as necessary for scholars, engineers, economists and statesman as it is for artists. For the man with no imagination the only thing possible is what exists already. For the man with no practical sense everything desirable is possible. The man with the well-balanced mind discerns the realizable ideal, or realizes the ideal. (Walras, 2005, p. 220)

In modern parlance, Walras is simply arguing for the possibility of what we would call economic “policy.” Through knowledge of the “natural forces” of the economy, we can manipulate them, to achieve desired “goals.” But it is only because the laws of the market have necessary, predictable consequences (given sets of initial conditions) that such an enterprise is possible at all. If we could not predict how market forces would operate when acted upon (again, just as the engineer might act upon physical laws), then we could not, through our “imagination,” manipulate them in accordance with our desires. It therefore must be the case, for Walras, that laws have necessary consequences, if his Baconian project is to have any promise.

But note again here the role of the concept of “nature.” Walras, because he is relying on the natural sciences as a model, insists that the laws of the economy are themselves natural (their clear social character notwithstanding), whereas the less problematic claim might be that such laws produce certain necessary consequences, given a certain set of institutions (and appropriately specified initial conditions). This language of the natural, in Walras’ Baconian conception of societal change through instruments of policy, is pervasive. Consider, as one last example, the following passage, in which Walras compares the laws of the market to the laws of gravity:

Because gravity is a natural phenomenon and obeys natural laws, it does not follow that all we can do is watch it operate. We can either resist it, or give it free rein, whichever we please, but we cannot change its essence or its laws. It is said we cannot command nature except by obeying her. This applies also to value. In the case of wheat, for example, we could either raise its price by destroying part of its supply, or lower the price by eating rice or potatoes or some other foodstuff in the place of wheat. We could even fix the price of wheat by decree at 20 francs instead of 24 francs a hectoliter. In the first instance, we would be acting upon the causes of the phenomenon of value in such a way as to substitute one natural value for another natural value. In the second instance, we should be acting directly on the phenomenon itself, substituting an artificial value for a natural one. It would even be possible, in an extreme case, to abolish value altogether by abolishing exchange. If, however, exchanges do take place, we cannot prevent them from giving rise to or tending to give rise to certain exchange values, naturally under given conditions of supply and demand, in short, of scarcity. (Walras, 1969/1926, p. 69)

As we have demonstrated at length above, however, exchange-value cannot plausibly be construed as “natural.” Hence my suggestion that it is only deemed so here by Walras because any such values follow as a necessary consequence of the economic laws of supply and demand. Expectations that values be determined otherwise simply cannot be met. An “artificial” value, on the other hand, is one set by decree – i.e., via a political act. That is to say, there can be no question of whether one can “obey” the laws of supply and demand. The question of whether to manipulate values from a (politically-constituted) space outside the market, on the other hand, is subject to normative debate, because no laws (under this view) govern such decisions. It is in this fashion – i.e., because Walras finds that the laws operating as a product of, and under the conditions of, the market, generate certain necessary, predictable, consequences – that Walras comes to regard such laws as “natural” (all the while, as we saw, instating on their artificial character.)

2.7. Walrasian Naturalism and Conceptions of Social Transformation

It may be evident by now that our examination of Walras’ Baconian approach above, and his deliberate treatment of a social system as akin to a natural one, raises certain theoretical

objections to “naturalism” as discussed in the introduction. Notably, Walras’ choice to model his science of economics on the natural sciences generally, and on rational mechanics in particular, gives rise to a conception of social transformation limited by the metaphor of the engineer. Social change, on this view, is a technical matter; it is a question of simply understanding the relevant social laws, and manipulating them (in Baconian fashion) to desired ends. However, as argued in the introduction (and, as we saw there, by authors such as Robinson (1975), Reder (1982), and Lawson (1997)), such a view is incoherent. To the extent that society is governed by laws (akin to natural ones), this would be no less the case for the policymaking class manipulating such laws. Walras regards his vision as properly bounded by a “practical sense” of the limitations on what is or is not possible; and yet insufficient attention is paid to what limitations might similarly govern the actions of those practicing Walras’ “applied economics.” Walras’ “practical sense” may, therefore, not be quite as attuned as claimed.

Furthermore, this technocratic view of social change, as we noted in the introduction, eclipses a view of social change, from, as it were, *within*. Hence, while we have with Walras (and his legacy generally) a vision of social change via the manipulation of social laws, we have no vision of the possibility of agents within society choosing to act differently to transform such laws. Returning to Lawson’s (1997) language, the Walrasian/Baconian view results in a conception that denies to human beings any “contribution...to the active making of their own history.” (p. 10)

Such possibilities for social transformation (i.e., for the active participation in history) are sketched briefly in chapter 4 and chapter 6. Before turning to these possibilities, however, it remains for us to consider one other issue regarding Walras’ texts – namely, the relationship between his naturalistic view of the economic system, and his normative judgements of that

system. For a full discussion of this relationship, we need to more closely examine Walras' theory of economic justice. It is to this subject that I now turn.

CHAPTER 3

WALRASIAN JUSTICE

In the preceding chapter, we suggested that Walras found something “natural” in his “artificial” economic system so as to draw conclusions about it that obtain as a matter of *necessity*. Such a project was essential, we saw, for Walras to fulfil his Baconian vision, namely, of *manipulation* of economic laws to achieve desired outcomes. Such manipulation is possible only if one can successfully predict the consequences of a change in conditions or parameters; and such prediction, in turn, is only possible if the consequences of these changes follow as a matter of necessity.

However, as we also saw at the outset of the previous chapter, among the necessary conclusions that Walras wanted to draw were those concerning “well-being” and “justice.” That is, since defending competitive markets on the grounds of their pure-and-simple naturalness was unacceptable (because human history existed over and above natural history), Walras wanted to defend them on the ground that they provide for both material well-being and justice. Indeed, since, as set out in detail above, there is simply no theory under which the market could be said to be natural, Walras’ decision to focus on it (for his model) *must* ultimately be understood on normative (and *not* natural) grounds. The irony in Walras’ system, however, is that his astute observation regarding the institutional character of the market is undermined by his desire to demonstrate a competitive market’s necessary consequences (in the realms of “well-being” and “justice”), insofar as the latter leads him to search for the market’s (purported) “natural” ground. To understand this, we need to examine more fully Walras’ conception of justice.

3.1. Walras on Justice in Exchange (Or, “Society is Not a Picnic”)

Walras, as we saw, wants to demonstrate the superior nature of competitive markets for “well-being” and “justice.” However, it would be a mistake to read him as treating each of these elements independently. This is crucial for understanding Walras’ project. Rather, as (Jaffé, 1983a) persuasively shows, what Walras hoped to do was demonstrate that a competitive market maximizes utility *consistent with* or *subject to* the requirements of justice. This is quite distinct from attempting to demonstrate that a competitive market maximizes utility full stop, *regardless* of the surrounding social institutions. If this latter project were indeed Walras’, then one might fairly charge him with failing to consider the possibility that, even if economic agents maximize utility given the institutional setting of a competitive market, utility could be *greater still* in the *absence* of such a market. But the charge would carry no force if it misread Walras’ intent. That is, If Walras’ intention was to show that a competitive market meets the requirements of justice, and that individual agents within a competitive market necessarily maximize utility, then he need not worry about whether some *alternative* set of economic institutions might create greater utility still, *if such institutions do not comport with justice*. Under this view, Walras’ positive analysis of utility-maximization is constrained, consciously and deliberately, by his normative project. Hence, to fully explicate that positive analysis, we need to articulate his normative project, i.e., his theory of justice.

First, Walras makes clear that this theory, which he otherwise refers to as “social economics,” is, at its heart, a theory of property rights. As many scholars have noted, Walras’ theory of justice is derived in significant respects from the “Natural Law” tradition (see, e.g., Ingrao and Israel, 1990; Jaffé, 1983b). To be clear (and as we observed in the introductory chapter) this is to be distinguished from the question of the “laws of nature” governing his

economic systems. Rather (and without elaborating on the variations in “Natural Law” theory), the concept of “Natural Law” referred to here (in its specific 19th century form) is a conception of justice that, among other things, grounds differing kinds of rights to property, including individual rights to private property.

To some, the identification of Walrasian ethics with the Natural Law tradition in the above sense is curious, insofar as Walras is sometimes deemed to be a socialist. But the label is at least potentially misleading. The sense in which Walras was a socialist was insofar as he called for state ownership of land. In other respects, he was very much a political liberal.¹⁹ Walras regarded markets, including the labor market, as spheres of free exchange, with buyers and sellers freely exchanging property rights over commodities.

More specifically, Walras regarded markets as a sphere of justice. For Walras the concept of “justice” revolved around (1) the right to dispose of (use or sell) one’s private property as one saw fit, and (2) justice in exchange, i.e., “commutative justice,” wherein no buyer or seller was in the possession of greater wealth following a trade than before a trade (even if he gained more utility.) For Walras, a competitive market guaranteed both of the above, first, because the existence of market relations implies rights to private property (i.e., private property is a necessary condition of the market) and, second, because a competitive market in particular (as opposed to a monopolistic one) guarantees that exchange-value in the market is a given (i.e.,

¹⁹ Certainly to Marxian varieties of socialism, Walras’ purported socialism would be unrecognizable. Among other things, Walras explicitly rejected a labor theory of value, in both its classical and radical forms, favoring instead his theory of “scarcity” as the basis for “social wealth” and for all exchange-value (as discussed above.) Hence, the analytic justification for Marxist theories of exploitation (under which surplus labor is exploited by capitalists) is absent.

it is a parameter) from the perspective of any individual economic agent;²⁰ this, in turn ensures justice in exchange.

We can understand these explicit connections between exchange and justice by looking at Walras' essay "Theory of Property" (Walras, 2010, p. 135). According to Walras, Under "Jevonian barter,"²¹ each trader attempts to obtain "the greatest possible satisfaction of his wants" (p. 137). Doing so involves Walras' well-known process of "tâtonnement," where prices are continually adjusted until quantity supplied equals quantity demanded (i.e., where the sum of the excess demands is zero.) At each newly-announced price, "the two exchangers will make new decisions, always consistent with the condition of maximum satisfaction of their wants" (Walras, 2010, p. 137). Ultimately, Walras reaches the (now familiar) conclusion that, when trade finally does occur—i.e., where supply equals demand—the ratio of the marginal utilities for each trader will be equal to the ratio of prices on the market, or, as he puts it (using his term "rareté" for marginal utility): "mathematics shows that... the ratio of the intensities of the last wants satisfied, or the raretés, of the two commodities be equal, for each exchanger, to the price of one commodity in terms of the other" (Walras, 2010, p. 137).

For our purposes, the salient point here is that, for Walras, the utility maximization achieved through Jevonian barter (as demonstrated through the "equimarginal principle") is only a "relative one"—i.e., relative to the principles of justice:

Jevonian barter is therefore an operation by which the two exchangers bring the satisfaction of their wants to the maximum that is compatible with the condition that one of them offers as much of his commodity as the other demands, and demands of the latter's commodity as much as he offers it. The maximum is therefore a relative one,

²⁰ As discussed above, Walras' logic (as is now familiar in standard economics) is that, in competitive markets, prices are given for individual economic agents because they are determined by the forces of supply and demand at the level of the market as a whole.

²¹ In calling simple commodity exchange "Jevonian barter," Walras acknowledged Jevons original contribution on this question.

respecting each exchanger's right of property over his commodity. It is an individualistic barter: it is carried out by the free will of the individual seeking his advantage in complete liberty. The trading leaves unchanged the *inequality* of wealth and welfare that existed before the barter as a consequence of possessing greater or smaller quantities of a commodity that is more or less useful and more or less limited in quantity. It takes place in the domain of *justice*, neither of the two exchangers owing anything to the other once the trade has been completed. (Walras, 2010, p. 137-138)

Note that Walras articulates here the two elements of the principle of justice in exchange discussed above: first, that each individual is left "free" to exchange, "in complete liberty," his own property, as he desires. Accordingly, Jevonian barter respects private property rights. And second, that such barter does not change the distribution of wealth following the exchange, notwithstanding an increase in utility (i.e., in subjective well-being)—"the trading leaves unchanged the inequality that existed before the barter...". The first element, the liberty to use and dispose of private property, is a necessary condition of market-exchange itself. The second results from competition. That is, the existence of competition allows us to treat price as a given (from the perspective of individual agents), since "...[i]f there were at a certain time several current prices for a commodity, the sellers would have the right to move from any place where the price is low to the place where it is highest, and the buyers, in reverse...the outcomes of these movements would be that the various prices would be adjusted to the same level. It is perfectly correct to quote the unique price immediately" (Walras 2010, p. 141). This "unique price" in turn guarantees justice in exchange by ensuring that "...however much a trader might benefit subjectively by an exchange yielding him maximum satisfaction within the limits prescribed by competitively determined uniform prices, the numeraire value of his assets remains unchanged, so that he is no richer or poorer after the exchange than he is before" (Jaffé, 1983a, p. 329).

Walras' recognition of the possibility of conceptions of utility maximization as might exist *outside of the sphere of* "justice" is illustrated by his discussion of Gossen. Walras credits Gossen with first articulating a conception of diminishing marginal utility: "First Gossen, and later Jevons, who knew nothing of Gossen's work, originated the negatively inclined utility or want curves" (Walras, 1926/1969, p. 204). However, from such a conception, Gossen arrives at the conclusion *not* that the ratio of the marginal utilities for each agent must equal to the price ratio on the market (and hence the ratio must be the same for each agent), but rather that the marginal utility for each agent for each commodity must be *the same*. Walras quotes Gossen as follows: "Upon completion of the process of exchange, the two commodities must be divided between the two trading parties such that the last atom of each commodity changing hands has the same value for one party as for the other" (Walras, 1926/1969, p. 204). However, this conclusion, as Jaffé (1983a) notes, can only be reached if one makes interpersonal utility comparisons. Furthermore, as Jaffé similarly observes, there are no "prices" in this scheme, and the only constraint is total *social* wealth, not the *individual* wealth constraint of each agent. Hence, it should not be surprising if, under such conditions, Gossen can find that total social utility *increases* by *transferring* goods from one agent to another.

For Walras, however, this entire enterprise is impermissible, not for mere technical reasons, but rather because it is inconsistent with his *normative* enterprise. Indeed, Walras concedes that Gossen's scheme creates a greater amount—in fact, even an "absolute" maximum—of social utility. Nonetheless, Walras will not include it in his theory of "pure economics" because it is barred by his theory of justice:

This type of barter, equally well-defined as [Jevonian barter], is an operation by which the exchangers' satisfaction of their wants taken together is brought to an absolute rather than a relative maximum, no account being taken of the quantities possessed of the

commodities; in other words, abstracting from the property rights over their commodities. (Walras, 2010, p. 138)

Or, again:

It is obvious that the maximum utility arrived at [by Gossen] is not the relative maximum utility of free competition, nor is it compatible with the condition that all parties buy and sell the commodity at a uniform rate of exchange. It is an absolute maximum...[and] consequently does away with private property. (Walras, 1926/1969, p. 205)

Walras further clarifies that he does not necessarily mean to “condemn” Gossen’s theory of maximum utility. To say that it takes place outside the sphere of justice is not *necessarily* to say that it is unjust. Rather, it is to say that it takes place in the sphere of “fraternity.” For that reason, he does not “condemn it all.” To illustrate its “fraternal” nature, he draws upon a personal anecdote.

Gossenian barter is not a form of barter at all, but of pooling the two commodities preparatory to sharing them. Here is an example from my memory of such a fraternal sharing of commodities. In 1846, at the College de Caen, we 30 boarders, every day at 4 o’clock in the afternoon, sat around the table in the small refectory. We each had a piece of dry bread furnished by the school. Some of us on occasion, on occasion these persons, on occasion those, had received pots of provisions from their families. All the others gave them their piece of bread, and they got it back with butter or jam. This was the rule; it was followed on condition of reciprocity, but without noting who owed whom, and that was Normandy, the region of strict law! These sorts of customs should be encouraged when it concerns children, and it will be maintained by young people and adults in many cases. In the end, however, society is not a picnic; concessions, acceptable as politeness when voluntary, would be turned down as being mortifying if imposed by law. (Walras, 2010, p. 140)

No doubt. Nobody promised Walras society would be a picnic. Hence, since it is not, Walras’ “pure economics” of formal modeling will not treat it as such. Instead, his pure economics will assume decidedly non-picnic-like conditions—namely, individual control over private property. In such a society, no one is expected to butter anyone else’s bread. Everyone gets to keep their butter and their jam—or if they choose to exchange it (for someone else’s

butter, jam, or perhaps especially good bread), suffer no loss in wealth. This is Walras' justice in exchange. Coupled with the assumption of a competitive market, it guarantees "inequality in positions"—i.e., that each party be just as rich or as poor after the exchange as before. We have therefore, it seems, a rather clear statement here of Walras' political liberalism and, moreover, an explicit declaration that the point of his otherwise purportedly "pure" economics is to support this political/normative project.

We illustrated in Chapter 2 the incoherence of Walras' contention that markets govern natural phenomena, in that it contradicts his otherwise insightful observations regarding the character of markets as "artificial" institutions. In this chapter, we have seen, additionally, just how competitive markets, coupled with private property, make manifest his ideals of justice. It appears then that Walras' decision to model markets is not best understood, after all, as an attempt to model features of the "natural" world, but rather to describe an economic reality that best reflects Walras' normative ideals.

Ironically, however, his insistence on describing the facts of the market as "natural" serves to undermine his normative enterprise, insofar as, according to Walras' own conceptual scheme, an evaluation of whether we *ought* to adopt a particular kind of economic institution (on the grounds that it conforms with ideals of justice) is possible only to the extent that such institutions are *not* natural, but, rather, "artificial." After all, the forces of nature, said Walras, are "blind and ineluctable;" institutional facts, on the other hand, may be changed.²² Indeed, as we saw, Walras himself claimed that, via man's "reason and progress" we continually "choose the better part" among differing forms of social organization (hence, in his view, progressing from the guild system to a *laissez-faire* system)(Walras, 1926/1969). To the extent, then, that

²² In this sense, then, is Walras in agreement with Miller (1979, p. 18), in that we cannot use conceptions of "justice" to evaluate natural phenomena.

Walras' characterization of exchange-value as "natural" implicitly naturalizes the institution of private property, he undermines his argument that we *ought* to affirmatively *choose* the particular form of social organization which he champions.

Of course, these sorts of confusions could well be avoided simply by clearly delineating between the natural and the artificial. That is, if we avoided calling either the facts, or the laws, of the market, *themselves* natural, even if "natural" facts (partly) accounted for them, then the resulting view of the "economy" might be made more coherent – and we might be able to rigorously distinguish our positive analysis from our normative. The possibility of a more coherent system along these lines is raised by the work of J.B. Clark, who, as we shall see, is careful to distinguish between "natural laws" with "social laws." However, whether his *analytical distinction* between the two is sufficient to forestall a *substantive conflation* of them, or of, in effect, a reduction of the social to the natural, is another matter. To address it, I turn now to an analysis of his work.

CHAPTER 4

JOHN BATES CLARK:

NATURE AND JUSTICE IN FACTOR MARKETS

Walras argued, as we saw above, that, notwithstanding the “artificial” (i.e., social) character of the market, laws governing the market were natural, and the phenomenon of value in exchange was, similarly, natural. He further argued that such natural laws compelled, as a matter of necessity, certain social outcomes, which themselves were just. This latter conclusion was predicated on an Enlightenment “natural law” theory of justice, which in turn argued in favor of rights to private property. Hence did Walras explicitly tie together the positive concept of the “laws of nature” with the normative concept of “natural law.” In the Walrasian view then, justice was immanent in nature, provided it was properly realized in and through the institutional structure of a competitive market.

I argue below that a similar logical structure can be found in the works of John Bates Clark. Like Walras, Clark has an explicitly normative project. Clark wanted to show that the distribution of income in a competitive market was meritocratic and, therefore, just. In so doing, Clark argued, as we shall see below, that (a) a natural law determined the distribution of income, and that (b) such distribution was just because each factor of production was paid according to its marginal productivity. Hence does Clark echo Walras, insofar as he too argues that certain laws of nature, given competitive markets, yield just outcomes.

At first blush, Clark’s analysis would seem to improve on Walras’, insofar as he avoids Walras’ conflation of the natural and the social (discussed above in chapter 2). That is, although Clark insists that there are natural economic laws, he also is clear that there are *social* economic laws, and he takes care to distinguish between the two, such that he does not deem any outcome

of the latter (such as exchange-values) “natural facts.” Rather, Clark argues that social laws are as they are because of certain natural laws that *manifest* in specific ways, *given the institution of the market*. Therefore, precisely because the market is an institution, facts that arise therein are social, not natural.

However, Clark’s specific way of conceptualizing the relationship between the two, I claim, tends to naturalize that which is social more than might first appear. In particular, as we shall see, Clark argues that the laws that govern the capitalist market take the form that they do precisely because such laws are *animated* by laws of nature -- operating, as it were, from below (i.e., from the natural ground). Hence, though the social and natural are distinguished, it is only as a purely formal, analytical matter; as a more substantive matter, the social is conceptualized as a function of the natural, while the natural is immutable and universal. Such a vision, I will argue, ultimately amounts to a superficial treatment of the distinctively *social* character of social laws. More specifically, it pays insufficient attention to the ways in which that which is social might *transform* that which we otherwise take to be “natural.”

Below, to illustrate such transformational possibilities, I will use two examples. The first concerns analysis of the positive effects of minimum wage legislation. Clark, like contemporary neoclassical economists, argues that any such increases in a legally imposed minimum wage will cause unemployment. Such an analysis, however, I will argue, is an artifact of his methodology, i.e., of articulating and describing a “natural” setting which serves as the foundation for his social setting. Hence, it is the Clarkian methodology, I suggest, that explains contemporary resistance to both empirical evidence and theoretical positions that stand in contrast to the standard neoclassical conclusion on this question. Second, I will discuss the possibility of “economic” behavior *not* in accordance with that of “homo economicus” – the particular *dramatis persona* so

essential to Clark's "natural" setting. Given Clark's interest in justice in relations between workers and capitalists, I will use as an example of such behavior (i.e., behavior that we might call *homo sociologicus*) decisions to reorganize capitalist firms as worker cooperatives. In the first case (i.e., regarding minimum wage laws), I will argue, the transformation at issue is that of any purportedly natural laws governing productivity; in the second, it is a transformation of the typically understood predicate of "economic man" himself.

Again, as noted above, as with Walras, Clark uses the concept of the "natural" both (a) to argue what *must* obtain (in markets) and (b) to argue that whatever does in fact obtain is *just*. That is, the concept contains within it both positive and normative implications. Indeed, one can go further and say that, for both Walras and Clark, the normative vision guides the positive analysis. For Walras, we discovered that, though in theory social welfare might be increased by certain non-market settings (i.e., that of "fraternity"), such settings were not compatible with "justice" and therefore outside the parameters of his purportedly positive model. For Clark, as already noted above, and discussed in greater detail below, economic "justice" consists of each factor of production receiving income proportionate to its contribution. Even more so, Clark is guided in this vision of justice by a desire to oppose the rise of socialism. In the absence, then, of this political motive, there would be no need for him to articulate his positive vision.

Accordingly, no analysis of Clark's logic regarding the relationship between the natural and the social can be complete without consideration of the political and normative motivations therefor. Such motivations will therefore also be addressed below. This will, ultimately, lead us to some brief concluding thoughts regarding the validity of Clark's position on the absence of exploitation in capitalism. While I do not intend to recite all possible arguments against Clark's normative conclusion here (and there are many), I will nonetheless consider whether the specific

institutional form of the capitalist firm does, in fact, render “justice” in the sense he describes, or whether the dispossession of workers from capital in the first instance (which, of course, could not and does not arise in his “natural” setting) bears on the question of whether each factor of production receives what is *rightfully* theirs.

Since the political question looms so large for Clark, I will begin, briefly, by examining it. I then turn to a discussion of his relationship between the natural (the “primitive”) and the social. I then more specifically outline such economic laws as he considers to be primitive, and therefore “universal,” regardless of the form of social organization. After this analysis, I turn to the critiques of Clarkian methodology noted above, namely, that his conception of the relationship between the “natural” and the social is unidirectional; the former is merely foundational for the latter. I illustrate this critique via the examples noted above, i.e., (1) effects of minimum wage legislation at odds with the Clarkian prediction, and (2) the erosion of the *homo economicus* predicate. Lastly, I turn, as noted, to a normative evaluation of the claim that capitalist institutions are just (per Clark’s definition.)

4.1. Socialism at Stake

Clark announces the primary motivation behind *The Distribution of Wealth* in the preface, as follows:

It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates. (Clark, 1899/1965, p. v.)

We can note immediately here two claims by Clark. First, that the distribution of income is controlled by a “natural law.” Second, that this law gives to every agent of production what the agent creates. Significantly, according to Clark, such a distribution is *just* or *rightful* -- that is,

one *deserves* to be compensated for (no more or less than) the wealth that one creates. Further still, for Clark, it is the market that, when competitive, makes manifest this “natural law”:

At the point in the economic system where titles to property originate,—where labor and capital come into possession of the amounts that the state afterwards treats as their own,—the social procedure is true to the principle on which the right of property rests. (Clark, 1899/1965, p. v)

The “social procedure” to which Clark here refers (as will become clearer) is the market. Hence, Clark’s argument is that the market, insofar as it reflects the workings of a “natural law,” rewards to each agent what he creates, and, accordingly, is rightfully his property. Insofar as Clark is arguing that property belongs to the person who “created” it, it seems fair to say that he is subscribing to a Lockean theory of justice in property rights. I will, at times below, then, refer to Clark’s theory as a Lockean one.

Such a theory, in addition to being in his published work, is also reflected in his notes. For example, in an unpublished manuscript entitled “Land and Labor in Economic Law,” Clark writes:

If under natural economic law some men get the wealth that others create society is built on a principle of robbery. If each man gets what he creates himself there is no separate question of distribution at issue. The division of social earnings is a mere corollary of production. Create wealth and get it is the rule... (Clark, n.d.)

Furthermore, for Clark, the claim that the market rewards to each economic agent what is rightly his own property – because it is what he himself has created -- has implications for social revolution. For, if the market were *not* meritocratic – if it did *not* reward to each person what they rightly deserve and hence, through its own “natural” workings, was indeed founded on a “principle of robbery” -- then any of these robbed individuals would be *justly aggrieved*. Indeed, if the working class received less than what they produced, they could rightly lay the charge of exploitation, and, therefore, justifiably foment revolution:

The welfare of the laboring classes depends on whether they get much or little; but their attitude toward other classes—and, therefore, the stability of the social state—depends chiefly on the question, whether the amount that they get, be it large or small, is what they produce. If they create a small amount of wealth and get the whole of it, they may not seek to revolutionize society; but if it were to appear that they produce an ample amount and get only a part of it, many of them would become revolutionists, and all would have the right to do so. The indictment that hangs over society is that of "exploiting labor." "Workmen" it is said, "are regularly robbed of what they produce. This is done within the forms of law, and by the natural working of competition." If this charge were proved, every right-minded man should become a socialist; and his zeal in transforming the industrial system would then measure and express his sense of justice. (Clark, 1899)

The stakes, then, for Clark, could not be clearer. If he is wrong, and if the working class does *not* receive what is rightfully their property, then socialist revolution is justified. The “social state” will cease to be “stable.” Clark’s project is therefore not only normative; it is political. It is to create a normative justification for the prevailing social order, such that no revolutionary uprising can claim any validity.

Clark’s desire for “stability” appears elsewhere in his writings as well. For example, in “Social Justice without Socialism” he writes:

Till recently American workmen have lived with their employers without hating them; and if wages can be fixed now by some appeal to the principle of justice, they can live with them in that way again. (Clark, 1914, p. 37)

This, then, is Clark’s hope, and the motivation for his analytical work: if the market effectuates the “principle of justice,” and if this manifestation of justice can be truly recognized, then we can achieve a genuine, peaceful labor-capital accord.

But the justification of Clark’s project requires his first demonstrating precisely what is “natural” about the laws of the market, and why it is that these laws necessarily yield economic justice. We therefore now turn to each of these claims.

4.2. Clark's Conception of the "Natural"

In articulating his notion of the "natural," Clark references the concept as used by the classical political economists, as follows:

The term *natural*, as used by classical economists in connection with standards of value, wages and interest, was unconsciously employed as an equivalent of the term *static*; and it is such natural or static standards that this volume undertakes to present. It aims to show to what rates the market prices of goods, the wages of labor and the interest on capital would conform, if the changes that are going on in the shape of the industrial world and in the character of its activities were to cease. It tries completely to isolate the static forces that act in distribution from the dynamic forces. (Clark, 1899/1965, p xi)

Hence does Clark, first, acknowledge the history in classical political economy of the use of the term "natural," and second, claim that the meaning of this term (though never explicitly articulated in this way by political economists), always simply meant static, as opposed to dynamic.

Such a treatment of the term "natural" may, at first, seem to divorce it from any of the implications of "naturalism" as outlined in the introductory chapter above. And yet, on further investigation, Clark's conception of the "natural" does, in fact, hook back onto the concept of "nature," in the sense of referencing that which exists prior to, and irrespective of, any particular form of social organization. That is, for Clark, it references laws that *necessarily exist* regardless of social institutions. In particular, it is precisely because of necessarily existing natural laws that the static laws of the market (which Clark acknowledges are *themselves* social, and not natural) take the form that they do.

To make this case, Clark examines what he calls a "primitive" economy, i.e., the economy describing nothing more than an individual in relationship to nature, entirely abstracted away from society (Clark, 1899/1965, p. 24) . No *social* economic relations need be examined – simply because there are none. Clark begins this examination as follows:

Man modifies matter by production, and matter modifies man through consumption. ...All this could be accomplished by an isolated man, or by men living together for protection or for the mere pleasures of association, without any system of exchange of products.

The distinctive feature of such a life is that it establishes direct relations between the individual man and nature....Obvious dependence on nature, obvious independence of other men – such is the rule of every one’s economic life...[C]onnected with this process there are no problems of distribution.

Yet, in this mode of living, which puts every man face to face with nature, *there is room for the action of all the more fundamental laws of economics*. Here, for example, is a hunter in a primeval forest, converting the flesh of animals into food and their skins into clothing and shelter. He is creating something that can be defined as wealth... (Clark, 1899/1965, pp. 25-26, emphasis added)

Clark’s procedure then begins with setting the scene of this primitive economy– i.e., an economy which consists only of an individual man “face to face” with nature. Such a primitive economy, says Clark, is governed by “fundamental laws of economics.” Furthermore, it is precisely because these laws are fundamental that they are also, says Clark, “universal,” – that is, in addition to governing primitive economic laws (describing an individual economic agent and his natural surroundings) they no less govern the laws of *any* economy, however complex. As he puts it:

There is....a distinct set of economic laws, the action of which is not dependent on organization. They are fundamental; and we now have to note that they are universal. They act in the economy of the most advanced state, as well as in that of the most primitive. (Clark, 1899/1965, p. 26)

To clarify further still, it is not merely that “fundamental” laws happen to operate both in “primitive” and social economies; it is that the whole reason they apply in the latter is because they exist in the former:

...the primitive law which puts a man face to face with nature and makes him dependent on what he personally can make her yield to him, is still, in essence, the law of the most complex economy. (Clark, 1899/1965, p. 37)

Note the strong ontological claims here. The nature of economic reality is such that the relationship between the individual and nature is fundamental to even the most “complex” economies, including, as we shall see, a market economy. Specific social laws, then, according to Clark, are particular manifestations of these “fundamental” economic laws such as exist in a “primitive” economy. Indeed, the latter is the “essence” of the former.

Noteworthy here as well is that Clark appears to give little justification for this ontological claim. The most we find is the apparent argument that, since a “primitive” economy relies on man’s “nature” and the natural setting around him, it necessarily follows that the laws of the primitive economy must also hold in any social economy. Truths of “General Economics” (a term he employs in his *Essentials of Economic Theory*, though not in his *Distribution of Wealth*), hence, encompass the laws of a primitive economy, which in turn must, of necessity, also hold true in a social economy:

The economy of a man who works only for himself is subject to laws that are based on his own nature and the character of his material environment. Because he is what he is and because nature is what it is there is a certain way in which he must proceed, if he will live at all, and there are certain conditions which must exist, if he is to live well. The inherent productive power of labor and of capital is of vital concern to him, since he is both a laborer and a capitalist; but he is in no way interested in what we commonly call the relations of labor and capital, since that expression always suggests the dealings of one class of men, who labor, with another class, who own or control productive wealth. The study of such relations takes us at once into the domain of Social Economy; but we can study certain universal laws of wealth without at all entering that domain. When we speak of the power that resides in a bow and arrow, we refer to a truth of General Economics and one which illustrates the inherent power of capital, though we may be far from thinking of lenders and borrowers in a modern “money market” or of dealings of any one class of men with any other. (Clark, 1907, p. 2)

Hence, the “primitive” character of the scene Clark describes for us (e.g., of the hunter face to face with nature with his bow and arrow) is meant to call our attention to essential facts of this scene – i.e., that of the natural environment, and of human nature; and this, in turn, leads Clark to conclude that the laws governing this primitive scene are essential to, and therefore

invariant as amongst, any *particular* form of social organization. They are, rather, “truths” of “general economics.” Or, drawing on the language of naturalism as discussed in the introduction, we may simply say that, in Clark’s view, such universal economic laws (of “general economics”) are necessary because they are natural.

Clark’s method, in turn, recapitulates his ontology. If the nature of economic reality is such that, first, the primitive is fundamental to the social, and second, that its laws are universal insofar as they apply both to the primitive and social worlds, then Clark must treat such universal laws (derived from the primitive scene) *first*, before addressing any particular social laws. Hence are there for Clark at least two “natural divisions” of economics, with the first describing “universal laws of wealth,” and the second describing the “social laws of economics” – i.e., the “set of forces which originate in relations between man and man.” These two divisions must be examined in turn: “When we know what happens in consequence of the economic actions and reactions that are taking place between man and nature, we need further to know what takes place in consequence of relations between man and man” (Clark, 1899/1965, pp. 26-28).

Hence must Clark unpack for the reader the exact nature of these fundamental laws in order to articulate the specific relationship between such laws and the laws of the market. I turn to this analysis now.

4.3. Clark’s Fundamental Laws of a Primitive Economy

In explaining his conception of universal economic laws, Clark first defines “wealth.” He does so in a manner similar to Walras. While Clark does not explicitly use a term equivalent to Walras’ “*rareté*” (i.e. “limitedness”), he does nonetheless employ the typical marginal utility-based argument in claiming that wealth does not apply to things like “air or salt water”—i.e. if one removes a unit of air or salt water, it has no effect on an individual’s utility. Further, and also

similar to Walras, Clark understands wealth to be that which is “appropriable.” Although Clark does not elaborate explicitly on the role of appropriation in wealth, it is, for him, evidently connected to the idea of “specific utility.” Were a commodity not appropriable, it would not be possible to possess it, and therefore acquiring an additional unit of it could not add to one’s utility. Hence, are “outward material things that are appropriable and, in this specific way, useful... economic goods. They are commodities, or concrete forms of wealth...” (Clark, 1899/1965, p. 41).

Most significantly for Clark, given his project as described above, this holds just as true for a primitive economy as it does for a modern one. Or, using his vivid description, it “...applies as perfectly to the canoe of a savage and its load of fish as it does to an Atlantic steamship and its rich and varied cargo” (Clark, 1899/1965, p. 41). Moreover, it is not just the essential role of “utility” in the constitution of “wealth” that holds true in primitive economies; it is also the fact that utility diminishes at the margin. Indeed, the law of diminishing marginal utility, according to Clark, holds true in social economies precisely *because* it holds true in primitive economies. For Clark, recall, primitive laws are (necessarily) universal. Hence, they must hold true regardless of the specific economic institutions. Clark’s demonstration of the universality of this law relies on the imaginative procedure discussed above, i.e., of appeal to an image of a primitive economy:

There is always a gain in diversifying the articles that men consume. This is a principle of human nature that affords a universal law of consumption...The diminution in the utility of successive units of goods of one kind makes itself keenly felt, if [the savage] works too long in one occupation. If, then, he has so much meat on hand that more will be of little use to him, he may turn to hewing out canoes, fashioning bows and arrows, or building huts. (Clark, 1899/1965, p. 43)

Again, Clark leaves the reader with a vivid picture. The “savage,” if he has too much meat, will, because the utility of that meat (like everything) diminishes at the margin, turn to, say, building

boats, so he can catch fish. It is therefore through this illustration of his primitive economy that Clark demonstrates his first universal economic law, i.e., the law of diminishing marginal utility.

With this task under his belt, (i.e., description of the fundamental law of consumer behavior), Clark moves on to laws governing production. Perhaps unsurprisingly, the two such laws he finds are, just like the law of diminishing marginal utility, also ones familiar to contemporary neoclassical theory—namely, the law of diminishing returns to capital (given a fixed amount of labor) and the law of diminishing returns to labor (given a fixed amount of capital.) Such laws, he claims, hold no less in primitive life than they do in a market economy.

Unfortunately, however, when moving to the sphere of production, Clark runs into a methodological difficulty. Notwithstanding the critical, foundational role played by the image of his “primitive” economy, the moment he moves to explaining the laws of diminishing marginal productivity of inputs, he abandons it. That is, he introduces social relations. For example, in claiming that the productivity of capital diminishes at the margin, he states that this is a “...universal law, which vitally affects the conduct of men, even in a primitive wilderness, in deciding how large an equipment of capital it pays to create” (Clark, 1899/1965 p. 50). And yet, in deploying his imaginative procedure for us, he does not call up a “primitive wilderness,” but, rather, something more: “Supply capital in successive units to a fixed force of laborers” he says, “and everywhere you get, as a result, smaller and smaller additions to your output.” Suddenly, then, we have introduced a “fixed force of laborers” – i.e., a form of social organization. And, with respect to the diminishing marginal productivity of labor, we see something similar. He claims that “...the diminishing productivity of labor, when it is used in connection with a fixed amount of capital, is a universal phenomenon. This fact shows itself in any economy, primitive or social” (Clark, 1899/1965, p. 49). And yet Clark does not provide

for us an illustration of the diminishing marginal productivity of labor in a “primitive” setting. Instead, by the time he draws one, he seems to have left the “wilderness” altogether. Instead, using agricultural labor as a familiar example, he writes:

With one man in a field of a given size, a certain crop will, on the average, be secured. With two men, however, the crop will not be doubled; for the second worker will create less than the first one. This reduction in the productivity of successive units of labor, as they are set tilling a field of fixed extent, furnishes the basis for a general law. (Clark, 1899/1965, p. 163)

Hence, Clark seems to violate his own procedure, insofar as he moves from individual labor to a collection of laborers (in demonstrating the laws of production) whereas the imaginative scenes he constructed for creating “primitive laws” rested on the former, and not the latter. To be sure, Clark does invoke his familiar picture of the “savage” in articulating his theory of production, provided he is merely depicting the choices the savage makes between producing consumer and capital goods:

A man living in solitude and making all his own goods, by the aid of his equipment of working instruments, has to form some conception of the productivity of a unit of labor. He may have an hour which is available for fishing or for working on a canoe that will make future fishing more productive. An hour may be devoted to gathering fruits or to fashioning a spade, for working the soil and thus making food in the future more abundant. In making a decision between two such uses of his time and effort he measures, in his own rude way, the productivity of a unit of capital and that of a unit of labor. (Clark, 1899/1965, p. 48)

In this way does Clark argue that, even in the absence of a market economy, we can, and indeed must, have a conception of the productivity of a unit of capital and a unit of labor, each apart from the other, since the *savage himself* must have some such conception, in order to determine where best to place his efforts at the margin – i.e., whether to spend his *next* hour working on creating capital (e.g. building a canoe or fashioning a spade), in order to improve future productivity, or whether to spend it on the direct production of consumer goods (e.g.,

fishing, or gathering fruits.) However, as noted immediately above, the moment he moves from simply describing the production of an individual (choosing between the production of consumer and capital goods) to describing the diminishing marginal productivity of one input, holding the other fixed, he leaves that “primitive” scene –and, instead, invokes a social one. His seeming incapacity to hold onto that scene may be suggestive of an essential flaw in his project, which we will elaborate on below.

Before turning to this flaw, it will be useful to summarize Clark’s own conception of the relationships between his identified “primitive” laws and the corresponding social laws. Such primitive laws, to review, are (1) the law of diminishing marginal utility; (2) the law of the diminishing marginal productivity of labor, and; (3) the law of the diminishing marginal productivity of capital. Given that, in his view, each of these laws is “fundamental,” regardless of the form of social organization, each therefore *explains* certain phenomena in a competitive market economy which, in turn, depend on these laws. Respectively, such phenomena are: (1) the exchange-value of consumer goods, (2) interest, and (3) wages. He elaborates on the foundational role of the “primitive” laws for the corresponding market phenomena as follows:

Universal principles, then, and the social applications of them, are the two contrasted things. There are no markets in a wilderness; yet the law of final utility, which governs markets, is there in action. There are no wages and interest to be paid in the economy of solitary life; yet the law of the final productivity of labor and of capital is there, as everywhere, in action. These two principles are the ones that we take from the omitted first division of economic theory, as we enter on the second discussion, which deals with distribution. We tacitly assume all the familiar facts about the nature of wealth, and about the character of the economic process, as a subjugation of nature by man. For immediate use, moreover, we need a knowledge of three laws, of which the first is one that we may term the law of the varying efficiency of consumers' wealth, which is the basis of natural value; the second is the law of the varying efficiency of producers' wealth, which is the basis of natural interest; and the third is the law of the varying efficiency of labor, which is at the bottom of natural wages. These are among the universal truths of economic science. (Clark, 1899/1965, p. 50)

Note here again how the economic laws of the “wilderness” (again, Clark’s “natural” setting) are all “in action” in a market economy. They hold no less true in the latter than the former. Indeed, precisely because they hold true in a “wilderness” – i.e., in a “natural” setting – they are therefore (per Clark’s analysis) “universal principles.” These relations can be represented in figure 4.1 below

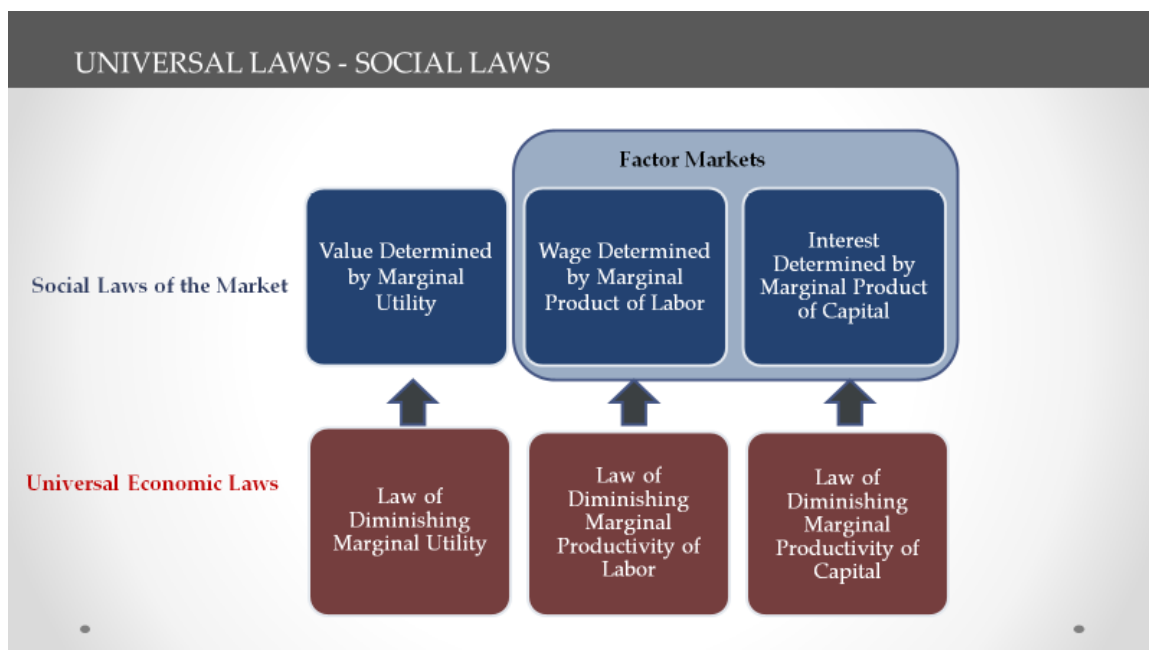


Figure 4.1. Clark’s Universal Economic Laws and Social Laws of the Market

Again, also as noted above, Clark takes care to distinguish between social laws and “primitive” universal laws. Unlike Walras, it would seem, at least on the surface, that he has avoided conflating them. Rather, the latter are *fundamental* (in his language) to the former. The upward arrows in figure 4.1 are intended to show that the social laws are as they are, given the institution of the market, only *because of* the underlying universal economic laws, themselves in turn discovered by inspecting (in imagination) a primitive economy.

As already suggested, however, Clark may not have been as assiduous in distinguishing between the natural (“primitive”) and the social as he believes. More precisely, the issue is

whether making social laws a mere *reflection* of the “primitive” laws, as opposed to something that *acts back upon* them, has the effect of naturalizing social laws as well. To examine the possibility of this “acting back” by the social world (as opposed to merely finding the primitive laws “in action” in the social world), I want to look specifically at one of the three relations outlined by Clark above, namely, that between the marginal productivity of labor and wages, and its implication for analysis of minimum wage legislation.

4.4. Social Laws of the Market: The Determination of Wages

Because Clark believes that wages are determined by marginal productivity, he sets the stage for contemporary theory of wage determination, wherein the equilibrium wage is determined by the interaction of labor supply and labor demand, and the labor demand curve, in turn, is derived from the diminishing marginal productivity of labor. However, it should be noted briefly here that Clark does not follow this procedure precisely. Clark does not set out a derived demand curve, and then analyze the “equilibrium” wage that results in the market – instead, he tries to find ways in which the wage is directly determined by the marginal productivity of labor. This leads to some confusion in his analysis.²³

²³ The confusion arises because Clark wants to argue that the marginal product of labor – and of labor alone – determines wages. He therefore regards it as necessary to find a space (be it conceptual or physical) in which all revenue from production does no more than cover the costs of labor. Clark believes he has found such a space in the realm of what he refers to as “no-rent” capital. As examples of this “no-rent” capital, he observes that there “... mills and furnaces so antiquated, so nearly worn out or so badly located that their owners get nothing from them; and yet they run, so long as superintendents can earn their salaries and ordinary workers their natural wages” (Clark, 1899/1965, p. 96). Wherever there are such “no-rent” instruments, he says, “labor... gets the entire product of the operation.” And here is where Clark believes he has found his laborer working at the “margin.” It is this “marginal” worker, then, who receives in wages precisely the value that he creates: “It is in positions like these [where laborers work with “no-rent” capital] that most marginal laborers are found. They are not working in solitude, yet their products are distinguishable from all other products” (Clark, 1899/1965, p. 96).

Significantly, for Clark, it is these workers who set the standard of wages for all workers in industry, since, from the perspective of the employer, the group of laborers are interchangeable. If one leaves, then, under conditions of free competition, he may well be replaced by another, who would perform the same work. At the same time, however, that Clark concludes that it is the productivity of the marginal worker that determines the wage, he also seems to acknowledge that wages will vary in the market. Indeed, as Clark himself says, whether capital is

For purposes of the present essay, however, any such confusion notwithstanding, I am regarding Clark's analysis as sufficiently similar to contemporary analysis, insofar as he argues that, ultimately, increasing the marginal product of labor will push up wages (whether he gets there by the precise same route as in contemporary thought or not.) Accordingly, and also in like manner with contemporary neoclassical thought, Clark argues against the institution of minimum wage legislation. For, Clark said, any such laws would require employers to pay their workers more than the value of their marginal product. This, in turn, would lead employers to lay off workers. Clark explains:

Unless the employees A, B, and C are worth to their employer six dollars a week, we cannot make him pay them that amount, even though D, E, and F are worth seven dollars. The employer who is enjoined from paying less than seven to any one will do the assorting which his interest impels him to do and will keep those who are personally worth what he has to pay them. (Clark, 1913, p. 291)

Or, again, (and elaborating more specifically with respect to the law of diminishing marginal productivity):

...it is not likely to be denied by many persons who have had practical experience, that crowding mills fuller and fuller of laborers would lessen the importance of each one to his employer...If we compel the owner of a factory to pay more than he can pay to his

"no-rent" or not does not depend solely on the physical condition of the capital – it depends on the market-determined wage: "...let the general rate of wages rise, and many of these instruments will be thrown out of use. Let the rate then fall, and the utilizing of them will be resumed" (Clark, 1899/1965, p. 96). Other passages, however, demonstrate some inconsistency on the question of whether the wages are determined by productivity of marginal workers, or are instead set by the market. For example, in again discussing "no-rent" instruments, he writes:

The entire product that is created by utilizing the poorest instruments that are kept in action at all, goes to the men who work with them. The amount of this product corresponds with and expresses the rate of general wages, and it is an important element in regulating that rate. The men who use such instruments are a part of the final increment of labor, the market price of which regulates the price of all labor. (Clark, 1899/1965, p. 98)

So, the "amount of product" produced by the "final increment of labor" is an "important element" in regulating the rate of general wages. But the final product of labor also, in turn, has a "market price" which in turn regulates the price of all labor. Hence it would seem that Clark oscillates between a theory wherein wages are determined by supply and demand, and wherein they are determined directly by the "marginal product." Either way, what we do not seem to have explicitly stated in Clark's analysis is a labor demand curve derived from diminishing marginal productivity. For other discussions on Clark's varying views on the determination of wages, (see, e.g., Homan, 1928, p. 62-63); see also ("The Neoclassical Theory of Distribution," n.d.)

present force, he will reduce it till he can afford to pay the higher rate to the persons who remain. For...these reasons, a forcible raising of the rate of wages for workers of the lowest grade will lessen the number employed. (Clark, 1913, p. 291)

In short, then, Clark is clearly arguing, to compel an employer to pay to his employee more than the marginal revenue product generated for the company is to create unemployment. Again, the argument is familiar.

4.5. Contemporary Literature on the Minimum Wage: An Assessment of (the Legacy of) the Clarkian Method

However, for all the familiarity of the argument, contemporary economic thought on the question of the minimum wage is not lacking in counter-arguments. Firstly, as an empirical question, the data is, at best, mixed. Though some studies show some small increases in unemployment from increases in the minimum wage, others do not.²⁴ As economist Richard Freeman summarized the matter, “[t]he debate is over whether modest minimum wage increases have ‘no’ employment effect, modest positive effects, or small negative effects. It is not about whether or not there are large negative effects” (Freeman, 1995, p. 833). More recently, a report by the Center for Economic and Policy Research, surveying the research, concluded that “...the weight of that evidence points to little or no employment response to modest increases in the minimum wage” (Schmitt, 2013). Similarly, one of the more influential studies on the issue, by Dube et. al. (2010) found “...no employment effects of minimum wage increases” (p. 961).

Second, and more significantly for our purposes, there are good theoretical bases for this evidence. One such argument in particular is salient in the present context – namely, that,

²⁴ I do not here intend to survey the empirical literature on the effects of minimum wage laws. No doubt there is vociferous debate to be found therein, with research claiming that the minimum wage has no discernable effect on unemployment sometimes called “terrible”(Worstell, 2015). For purposes of this essay, it is sufficient to note both the significant amount of empirical research supporting that position, and the frequent resistance to the theoretical reasons offered for these results, their plausibility notwithstanding.

though per Clark's argument, the wage is a function of productivity, it is no less likely that productivity is a function of the wage. The literature is replete with various mechanisms behind such a story. For example, as is often noted, higher wages tend to decrease turnover; this, in turn, reduces training and similar costs, boosting worker productivity (Dube et. al. 2012). Similarly, payment of a higher wage is sometimes said to act as a kind of social signal – a communication of the employer's valuation of the individual worker. In response to this signal, workers increase their productivity.²⁵

Regardless of the mechanism, what is noteworthy for us here is that all such stories involve *social conditions affecting the otherwise purely "natural" conditions of productivity*. However, as we saw above, such a logic is foreclosed by Clark's method. Under Clark's method, the "primitive" (natural) conditions of production (as imaginatively revealed) are foundational for the social conditions. Hence, since productivity is conceptualized purely as a natural (not social) phenomenon, there simply is no room in his method for the possibility that productivity may (in part) be a function of the wage, and not *exclusively* the other way around.

The question we are then posing here concerns whether Clark's conception of such natural laws as he finds (in his primitive scene) serve to circumscribe, or delimit, the bounds of his adduced "social" laws in the manner he claims. Clark in effect assumes that the laws governing individual human economic behavior – i.e., the laws governing the behavior of a

²⁵ See, e.g., Katz (1986), who notes that higher wages can "...facilitate the elicitation of effort by creating feelings of equitable treatment among employees" (pp. 270-271). Further, in addition to the economics literature, we also have anecdotal evidence of these sorts of mechanisms in the form of accounts of business owners themselves. For example, Craig Jelinek, President and CEO of Costco, claims that paying higher wages is good for business because it leads to "...attraction and retention of great employees. Instead of minimizing wages, we know it's a lot more profitable in the long term to minimize employee turnover and maximize employee productivity, commitment and loyalty" (Lutz, 2013). IKEA, similarly, maintains that its strategy of paying what it deems a "living wage" (specifically, by tying wages to MIT's living wage calculator) leads to both reduced turnover and more productive employees (Jamieson, June 24, 2015).

Robinson Crusoe – neatly and seamlessly find application in laws governing social behavior, as though the very nature of Robison Crusoe as an individual remains the same in all respects as he interacts with society. But this is claim is tenuous at best, and certainly not self-evident. At issue is whether Clark is justified in regarding primitive laws merely as the predicate or foundation for social laws – or whether, instead, the very fact of social intercourse in turn acts *back* upon individuals to shape them such that, even if it were possible to imagine an abstract individual in isolation from society (as though the individual were not the product of the society in the first instance), the re-introduction of that individual to society would have transformative effects.

The specific way in which I have suggested that such transformative effects might be manifest in the setting of the labor market concerns whether wages are mere functions of productivity, or whether productivity can be a function of the wage (and whether, accordingly, the “law of demand” must necessarily be derived as a pure function of the marginal product of labor, as Clarkian/neoclassical thought holds). I shall consider another possible transformative effect below, concerning the role of *homo economicus* in Clarkian analysis. However, before doing so, it is worth considering the continued influence of the Clarkian approach in policy debates over the minimum wage. The plausibility of theories holding that productivity may be a function of the wage notwithstanding, we nonetheless find a certain resistance within quarters of the economics profession to such suggestions. Whence its source? The answer, as I have already hinted, might well be in the Clarkian legacy. Such an answer suggests itself if we look at the *language* in which the resistance is framed. Repeatedly, we find, the law of demand (in the labor market) analogized to a natural law. Take, for example, this striking statement by Congressman

Ron Paul. In arguing against minimum wage legislation on the floor of the House of Representatives, he proclaimed:

The announced purpose of this bill is to raise living standards for all Americans. This is certainly an admirable goal, however, to believe that Congress can raise the standard of living for working Americans by simply forcing employers to pay their employees a higher wage is equivalent to claiming that Congress can repeal gravity by passing a law saying humans shall have the ability to fly. (Congress, 2007)

Similarly, political columnist David Brooks, in opposing the minimum wage, wrote “...despite what some people want to believe, the laws of economic gravity have not been suspended” (Brooks, 2015). Language of this sort appears not merely in the speeches of politicians and pundits, but in the writings of economists as well. Consider, for example Gary Becker’s claim that “even a wizard would have a great deal of difficulty repealing the law that higher minimum wages reduce employment. Since politicians are not wizards, they should not try” (Becker, 1995). Clearly, then, if the law of demand cannot even be repealed by a *supernatural* being (i.e., Becker’s wizard), then it must *at least* have all the power of a “natural” force (if not greater.) Similarly, Walter Williams (John M. Olin Distinguished Professor of Economics at George Mason University) argued that it is no less “lunacy” to imagine the non-universality of the law of demand as the law of gravity simply because “laws are applicable everywhere; that’s why they call it a law” (Williams, 2010). Similarly, economist Tim Kane (J.P. Conte Fellow in Immigration Studies at Stanford University’s Hoover Institution) claimed that “...the goal of price controls like the minimum wage is essentially to repeal the law of supply and demand, but senators might as well try to repeal the law of gravity” (Kane, 2005). And again, in response to Card and Krueger’s study finding no adverse impact on employment by an increase in the minimum wage in New Jersey (Card & Krueger, 1994), economist Finis

Welch issued the precaution that “If you drop an apple and it rises, question your experiment before concluding that the laws of gravity have been repealed”(Kramer, 1995).²⁶

Even where economists do not resort to explicit analogies to natural law, they often nonetheless endorse the underlying logic wherein the predicted consequences of increasing minimum wage hold as a matter of *certainty*. For example, Milton Friedman criticizes minimum wage proposals as follows:

The State can legislate a minimum wage rate. It can hardly require employers to hire at that minimum all who were formerly employed at wages below the minimum. It is clearly not in the interest of employers to do so. The effect of the minimum wage is therefore to make unemployment higher than it would be. (Friedman, 2009, p 179-180)

However, as we have seen, whether it is “clearly” in an employer’s interests to retain employees at the higher wage may be subject to debate, insofar as the wage increase may increase productivity. (Further still, Friedman’s analysis not only assumes that self-interest necessarily means that a binding minimum wage would create unemployment; it also takes self-interest to be a necessary assumption. Whether this assumption is necessary or not is something I turn to shortly below, in the context of Clark’s early work.)²⁷

One last point requires mentioning on the use of Clark’s method in analyzing the determination of wages. It would be mistaken to suggest that Clark was entirely unaware of the ways in which the specifically *social* character of the laws of competitive markets could change

²⁶ Even in the absence of explicit analogies to “natural laws” the sheer bewilderment, or, perhaps better, scornful derision, of many authors in the face of the idea that there may be some variation in the law of demand would seem to betray an unwillingness to consider a shift from the Clarkian method (see, e.g., Worstall, 2015).

²⁷ While we cannot here survey every comment by every economist and politician arguing against increases in the minimum wage on Clarkian marginal productivity grounds, the above examples are at least suggestive of the ways in which the contemporary economics profession (and its attendant policymakers) is still indebted to Clark’s method. Of course, again, the very existence of increasing acceptance of theories outlined above (as surveyed, for example, in Schmitt, 2013, discussed above) also suggests that the economics profession is hardly irretrievably wedded to Clark’s approach. But such alternative theories are still, at this late date, not part of the core teaching of basic neoclassical logic, nor does it find influence within policy circles without meeting resistance of the Clarkian sort. The Clarkian approach, therefore, still seems to hold a significant grip on the economic imagination.

our analysis of the underlying “primitive” laws. On the contrary, Clark is aware that the introduction of social relations raises, specifically, the question of “fidelity” – what we might today refer to as the “principal-agent” problem:

One of the greatest problems of modern business is how to make directors and executive officers of corporations faithful to the stockholders who employ them. *In the primitive state these problems do not arise.* When a man is working for himself, mere interest largely takes the place of fidelity. If today any one secures a good house of his own to live in, it is because he employs contractors, overseers, all of whom are, in the main, faithful to his interests and see that the work of building is properly done. A savage looks after his own interests as his personal work proceeds; and yet even in his case there is the germ of that enthronement of character in the supreme case which is the prominent feature of highly organized industry. In building a hut to shelter his family, a savage puts into his work conscience and affection as well as muscular effort; and when the mother of the family does the work, the altruistic element in it is still more conspicuous. As society becomes highly organized the important of the moral element in all labor increases till the further progress, or even the existence, of the social order, may be said to depend on it. In the world of business there is now distrust and turmoil, and revolutions are feared, because of the unfaithfulness of a class of men to trusts committed to them. (Clark, 1907, p. 15 emphasis added.)

Hence, the greater and more complex the form of social organization, the increasing importance of the “moral element.”²⁸ Indeed, it is the weakening of this “moral element,” per Clark’s diagnosis, that has raised the specter of “revolution.” However, notwithstanding his clear understanding of the importance of the moral component, it seems to escape Clark’s attention that the very existence of that element could bear on his positive conclusions regarding the outcomes of minimum wage laws. That is, the increase in wages could, surely, increase “fidelity.” But this is neither part of Clark’s analysis, nor his prescription.

²⁸ Clark’s recognition of the “moral element” as a component of social organization dates back to his early work as well, and indicates that he did not make as decisive a break with his early work as is sometimes suggested. We shall revisit this question, and consider more the relationship between his early and later work, below.

4.6. *Homo Economicus*: Clark I v Clark II

I argued above that Clark's method fails to consider the ways in which the distinctly social character of social laws might act to transform the natural laws on which they are purportedly predicated. I want here to explore this possibility further. First, we might note that, in marshaling support in favor of this sort of view, and against the more purely naturalist procedure of Clark, we find an ally in none other than John Bates Clark, who wrote, in *The Philosophy of Wealth*:

Society holds two distinct relations toward every man; it is the object of his efforts; he is the object of its efforts....*The social relation reacts on the nature of the individual.* Man... is transformed in his whole being by the unifying process of social development. (Clark, 1887, p. 40, emphasis added)

If indeed this is correct, and the social relation reacts on the nature of the individual, then one cannot simply extrapolate from the nature of the individual (assuming there is such a thing) to society. And yet, as discussed, that is precisely the procedure of *The Distribution of Wealth* (as well as of other texts in his later work discussed above, including *Essentials of Economic Thought*).

Of course, the Clark who argued against that procedure was not the same Clark as the one who advocated for it. The former Clark was the Clark of roughly 1877 to 1886 -- what is typically referred to as his "Christian Socialist" period, during which he still remained largely under the influence of the German Historical school. (See, e.g., Henry, 1995; Leonard, 2003). By 1886, however, Clark had abandoned these views, and become, as we now know, a seminal thinker in the neoclassical revolution. We can denote the former Clark I, and the latter Clark II.²⁹

²⁹ While a common interpretation of Clark is to read him as undergoing a significant, or even radical, break in his thought, between his "Christian Socialist" and his "neoclassical" period (see, e.g., Tobin, 1985, p. 29), one can also argue that more continuity exists between the two periods than is often recognized (see, e.g., Henry, 1995). I do not, in this essay, weigh in on the relative merit of the two positions. I will nonetheless observe here that even a scholar like Henry, who advocates for the latter view, still acknowledges that it would be a mistake to regard Clark in his

Immediately above, we noted that one way in which social laws might serve to transform the “primitive” “natural” laws on which they are said to be founded concerns the relation between wages and productivity. One additional, and arguably more fundamental way, however, concerns the role of *homo economicus* in economic theory. Clark II assumes *homo economicus* to be the model of human beings in society. And, armed with that substantive assumption, he then follows the procedural dictates of methodological individualism in constructing a theory of the economy. That is, he simply takes each individual Robinson Crusoe, as *homo economicus*, aggregates them, and arrives at a picture of society as a whole.

Clark I, however, rejects both the substantive assumption and the procedural approach. For him, each individual in society cannot simply and straightforwardly be described as *homo economicus*. This kind of “assumed man” is, for Clark I, “...too mechanical and too selfish to correspond with the reality; he is actuated altogether too little by higher psychological forces” (Clark, 1887, p. 35). Rather, says Clark I, each person’s condition as, necessarily, a social animal, opens up a wider range of desires and motives – including unselfish ones. Indeed, Clark I is quite emphatic about this point:

The growing complexity of the economic process has been accompanied by an increasing need of moral force, and by an increasing need of it in actual operation... Together, therefore, with mere altruism, the economic principle by which man, in self-interest, is led to work for others, there grows, in controlling influence, the higher altruism of unselfishness. (Clark, 1887, p. 41)

Clark I thus distinguishes between what he calls “mere altruism,” which he defines as man working for others out of “self-interest” (in short, the version of the self underlying Smith’s “invisible hand” theory), and “higher altruism” – i.e., the altruism of genuine unselfishness.

early period as a “proto-neoclassical.” Notably, Henry points to the same passages as we come to shortly below, regarding criticism of the *homo economicus* assumption as too “selfish” and “mechanical.” (p. 17) Such criticisms, he correctly observes, could not emerge from someone who was merely a “proto” neoclassical economist.

Clark is, furthermore, adamant that such motivations of “higher altruism” are not mere secondary considerations in the study of economics. They cannot, he says, be reduced to mere “disturbing elements” (Clark, 1887, p. 45).³⁰ Rather, they are essential to the comprehensive study of economic activity. In their absence, the public institutions upon which, in many ways, self-interested actors in markets are dependent, would not exist:

The unselfish forces of society are doing practical work. They create the altruism which gives without return. It is not *do ut des* but simply *do*, where they are in control. They have filled the land with schools, churches, art museums, hospitals and numberless non-mercantile agencies for social improvement... If the extreme and narrow view be taken that wealth in the process of disbursement is beyond the limits of economic study, this objection may be met on its own ground. It may be shown that the market itself is permeated by moral influences, and that the competitive principle, instead of being supreme and restless, exists at best by sufferance, is subject to constantly narrowing restrictions, and is liable, in particular forms, to be totally suppressed by the action of that moral force which is, in reality, supreme. (Clark, 1887, p. 45)

Or, yet again:

In the last analysis the sense of right in men is a supreme motive, in the market as elsewhere. It is not the centripetal force in economic society. Its action is not an occasional or “disturbing” influence; it is constant, and increases with time and civilization. If classed as a disturbing force, it promises eventually to overshadow those classed as normal. There is, in fact, nothing whatever of a disturbing nature about this motive; it’s whole action leads to harmony...”Every man for himself” is the principle of disorganization and chaos; “every man for mankind” is the principle of organic unity. (Clark, 1887, p. 48)

³⁰ Analyzing altruistic motivations as simply “disturbing forces,” says Clark, assumes that self-interested and altruistic motivations combine “mechanically” whereas the more proper analogy is to imagine they combine “chemically.” Or, as he explains:

The actual course of a cannon-ball may be determined by a mathematical computation followed by the proper allowance for atmospheric resistance ; but the social activities of men cannot be determined by assuming that man is a being of a certain kind, elaborating the conclusions with nicety, and then endeavoring to introduce the proper allowance for the fact that man is, after all, a being of quite a different kind. (Clark, 1887, p. 33)

The notion that one can simply take *homo economicus* as a given, and then “add in” non-self-interested motives has been criticized in some contemporary literature. For example, Bowles & Polania-Reyes (2012) criticize what they call the notion of “separability” assumption, wherein one can treat *homo economicus* as merely a simplifying assumption, to be modified later by simply “adding in” other non-self-interested aspects of persons (this “separability” procedure might fail, they say, on the grounds that self-interested preferences may, under some circumstances, serve to “crowd out” social preferences.)

We may be agnostic here regarding Clark I's bolder claims, namely, that the "...sense of right in men is a supreme motive, in the market as elsewhere [which] increases with time and civilization" or perhaps even the still bolder claim (quite contrary to the standard neoclassical, or even Smithian claim) that we only achieve an "organic unity" of society when *abandon* self-interest, and insist instead upon "every man for mankind."

We *may* however here entertain at least the *possibility* that *homo economicus* does not describe in whole, or perhaps even in the main, man's "economic" behavior. And yet, of course, the entire analysis of marginal productivity theory, and the positive prediction from which follows from it – namely, that an increase in wages will necessarily cause a decrease in the quantity demanded of labor – rests on that assumption.

On removal of that assumption, other possibilities begin to emerge. For example, firm owners may decide to pay employees higher wages not *exclusively* because they believe it will improve their bottom line, but also, in part, because of *beliefs* or *values* regarding the necessity of a living wage. Indeed, business owners (both large and small) in support of an increased minimum wage are often on record expressing just these sorts of normative sentiments. Some of these statements have been collected by the coalition "Business Owners for a Fair Minimum Wage." For example, the coalition quotes Joseph Rotella, Owner of Spencer Organ Company in Waltham, Massachusetts as saying: "America should be a country where no one who puts in a fair day's work can't afford to make ends meet." Similarly, Brian England, Owner of British American Auto Care in Columbia, Maryland, says "...some businesses pay so little their employees can't make a living. That's not right. We should be moving working Americans as far away from needing the social safety net as possible" (Business For a Fair Minimum Wage, 2013). Similar sentiments are also expressed elsewhere. For example, in support of the Seattle

Living Wage campaign, small business owner Molly Neitzel writes “Many people working full time on today’s minimum wage aren’t able to support themselves. I believe that as a community, we have to be willing to make some changes so that everyone in our city can have a chance to thrive”(Neitzel, December 4, 2014).

Still further, some employers might be willing not merely to pay employees more, but to actually *cede authority* to employees, such that they themselves become joint owners and decision-makers in the firm, and hence, collectively and democratically, determine the share of the firms’ revenue directed towards labor. For example, in 1971, the owners of the small business “The Cheeseboard” in San Francisco, decided that their political beliefs were at odds with their exclusive ownership of a conventional capitalist firm. To render their beliefs and practices harmonious, the owners, of their own accord, crafted an arrangement whereby all employees of the small business bought into the firm, to become owners. Since then, the business has operated according to the ideals of democratic participation in the workplace (Jackall & Levin, 1984). Other examples have been collected in the (still quite nascent) literature on voluntary cooperative conversions. Jennie Scheinbach, founder of Pattycake Bakery in Columbus, Ohio, said that conversion allowed her to run her business without “exploiting the labor” of the workers (Lingane & Reiger, 2015). Similarly, Marc Mascarenhas-Swan explained his decision to convert to a coop by saying “Using the coop mechanism, I can avoid exploitation of other people’s labor. Where the fruits of labor are shared based on the amount of work you put in, I can rest easy with my own conscience” (Lingane & Reiger, 2015). And the most famous example of such a voluntary distribution of economic authority is most likely that of the Mondragon cooperatives, in the Basque region of Spain. Begun by Father Arizmendi in the

wake of the Spanish Civil War, and inspired by left anarchist principles, one could hardly claim that its origins lay in the person of *homo economicus*.³¹

Obviously, we would not be expected to claim here that any of these sorts of economic decisions, which, let us say, arise from the personage of *homo sociologicus* (which, by definition, cannot make an appearance in Clark's strictly Robinson Crusoe setting, simply because there is no society in which to interact) as opposed to *homo economicus*, operate as the basis of economic "laws" of any kind. Certainly nothing in our very truncated discussion here would suggest that such decisions evince "natural" laws, or, even less so, social laws of "the market" or of "capitalism." And yet, it is precisely their *exclusion* from any kind of "law" (whether social or natural) that is of interest here. For, in failing to consider *different* kinds of behavior, *other* than in conformity with social laws of capitalism (or any other economic institution) we deprive ourselves of the resources with which to imagine how capitalism (or the relevant institution) might *transform*. Put otherwise, I am suggesting here that, to imagine a transformative shift *from within* capitalist institutions, one has to allow for the possibility that economic agents will make some *new, unexpected* decision – i.e., one which changes the contours of the institution under which they are acting. And, if indeed, these sorts of decisions are possible, then it must follow that at least some of the purported "natural" predicates of the social laws of that institution (such as *homo economicus*) cannot be quite as natural as might first appear.

³¹ See, e.g., Whyte & Whyte, 2014. Of course, Clark would say that former sole owners such as Scheinbach and Mascarenhas-Swan are under a mistaken impression, since there is no exploitation under capitalism. Therefore, if business owners wish to assuage their "conscience," all they need do is read Clark's analysis. Whether Clark is correct in this regard is, however, another matter. We will return to this question below.

4.7. Clark, Walras, and Laws of Nature

We began by comparing Clark to Walras, noting that, while Walras seems to conflate the social and the natural, referring to “value in exchange” as a natural fact, and even sometimes regarding economic laws as themselves natural, Clark, at first glance, seems to avoid this mistake, by explicitly distinguishing between universal laws of a “primitive” (natural) economy, and the social laws of a market economy. However, given the above analysis, it now seems that Clark was not quite as successful in separating the two as first appeared. By regarding his “primitive” laws as foundational for his social laws, he fails to take their social character sufficiently seriously. Indeed, it may then not be surprising to discover that Clark, just like Walras (and like contemporary economists indebted to the Clarkian method, discussed above), found himself likening his very own social laws to natural laws – specifically, to the law of gravity:

...there is working, if we will see it, a law that makes for peace founded on justice. It tends in the direction of a fair division of products between employers and employed, and if it could work entirely without hindrances, would actually give to every laborer substantially what he produces. In the midst of all prevalent abuses *this basic law asserts itself like a law of gravitation*, and so long as monopoly is excluded and competition is free... its action cannot be stopped, while that of the forces that disturb it can be so. (Clark, 1914, p. 34-35, emphasis added)

The laws of a competitive market are, it turns out, as inexorable as the law of gravity – notwithstanding their social character. Furthermore, just as for Walras, such laws yield a form of justice – i.e., it gives to every labor “substantially what he produces.”

Further still, for Clark (as for Walras), justice is facilitated by the workings of natural laws. Nature, then, is our aid in our pursuit of justice. Indeed, Clark does not shy away from

making such a proclamation, and articulating his vision, with nothing short of religious inspiration.³² Immediately following the above passage, he adds:

In this is the most inspiring fact for the social reformer. If there are "inspiration points" on the mountaintops of science, as well as on those of nature, this is one of them, and it is reached whenever a man discovers that in a highly imperfect society the fundamental law makes for justice, that it is impossible to prevent it from working and that it is entirely possible to remove the hindrances it encounters and let it have the first play. Nature is behind the reformer, often unseen, always efficient, and, in the end, resistless. To get a glimpse of what it can do and what man can help it do is to get a vision of the kingdoms of the earth, and the glory of them that may come from a moral redemption of the economic system. It is a redemption that man and nature can together bring about if only man himself is worthy of this alliance. (Clark, 1914, p. 35)

Hence, nothing short of “glorious” “kingdoms” are promised to us, provided we transcend to the “mountaintop,” and deliver, through our alliance with nature, a “moral redemption” of the economic system – if, that is, we are worthy.

For both Walras and Clark, then, “nature” has a dual significance. On the one hand, it signifies that which subsists independently of any particular social structure. That which is “natural” is, therefore, necessary – i.e. it is unalterable. At the same time, it has a normative connotation – i.e., nature is married to justice. As we saw, for Walras, natural economic laws, as manifested in competitive markets, yield just outcomes, in conformity with certain 18th century theories of “Natural Law.” Similarly, for Clark, the concept of “nature” connotes not only that which holds in “primitive” economies (and are, on that account, universal), but also of a kind of “natural order” which, if we would allow to manifest in a competitive market economy, can “redeem” us and deliver justice (in factor markets).³³

³² Religion served as a source of inspiration from a fairly early age. Clark considered a career in the ministry, and applied to Yale Divinity School, but was persuaded to pursue political economy (Henry, 2012, p. 2).

³³ In this sense, then, Clark, even in his later work, was still influenced by certain religious influences as motivated him in his earlier Christian Socialist period. For, as Henry (2012) argues, religious teachings at that time held that the “world should be accepted as a natural order”...or, alternatively, that it was “divinely ordered [and] harmoniously structured.” (p. 8)

However, this dual usage of “nature” for Clark, just as for Walras, creates a certain dilemma. That is, in invoking “nature” to argue for the necessity of certain economic outcomes (under specified – i.e., competitive – conditions) they simultaneously eclipse possibilities for transformation. In particular, in Clark’s case, as discussed above, such possibilities include (a) the effects on human productivity of wages under a labor contract, and (b) the possibility for social relations to transform the labor contract entirely, such that workers do not merely receive payments from owners, but might be owners themselves.

While noting the conceptual similarities with Walras’ scheme, it is important also to take note of dissimilarities. In the main, we do not see, with Clark, any particular theoretical conception of the natural *sciences*. That is, there appears to be no critical reflection on the relation between economics as a social science and the natural sciences, let alone a desire to put the two on the same ontological footing. Nor does there appear a conscious desire to emulate the methodology of the natural science specifically for the creation of a *social technology* – as was the case with Walras. That is, we do not see with Clark the emulation of the Baconian philosophy, whereby we learn the “natural laws” of the economy, precisely so that we can manipulate them to achieve desired outcomes. The absence of this line of reasoning seems to be a function of Clark’s relative lack of interest (in comparison with Walras) in the question of “methodological monism” – i.e., the question of the extent to which the natural sciences function as the proper ontological and methodological model for the social science of “economics.” That said, for Clark, appealing to laws of nature nonetheless fulfills, as noted above, a similar function as for Walras – to wit, first, it provides the conceptual field to argue that certain laws of the economy are necessary and unalterable; and, second, it provides the essential language for us to conceptualize justice as arising out of a kind of natural order.

One last issue, before concluding: of the two ways in which we considered that the social (being distinctively social) acted back upon the natural (to transform it), the second – i.e., that social relations, and the attendant displacement of *homo economicus*, might transform the labor contract entirely, such that workers themselves own the capital – raises, of course, the question of “exploitation” under capitalism. And this, as we saw, motivated Clark from the outset. Therefore, I want to address that subject, under Clarkian analysis, below.

4.8. Clark and Exploitation: The Social Conditions of Rewards to Labor and Capital

As we saw, Clark’s motivation for his marginal productivity theory of wages was to show the absence of exploitation under capitalism. What can we say about the success of this demonstration?

The argument, as we noted, among other things, depends on the notion that one can isolate marginal products of labor and capital, respectively. But that claim is suspect. Notably, even if we can find the marginal product of one factor of production, in the sense of determining the partial derivative of output with respect to that factor, it does not follow that the additional output is the *exclusive* product of that factor. That is, whatever the marginal product of capital (or labor) may be, it is not a product of the capital (or labor) *alone*. As Pullen (2009) argued, “*ceteris paribus* is not *ceteris inefficacibus*” (p. 33). The mere fact that another factor is being held constant does not mean that it suddenly has no effect on the outcome.

What, then, does it mean, in practice, to say we have identified the “marginal product” of something? In effect, what we have identified is the amount a firm would lose in revenue if one unit of that factor were removed. Hence, Clark’s claim, in the end, boils down simply to the assertion that, in a competitive market, a firm will be willing to pay, for a unit of labor or capital, up to (and no more than) the revenue the firm would lose if it lost one unit of labor or capital.

This may be a reasonable enough description of what happens in a competitive factor market. But the fact that we might be able to identify the specific amount of revenue a firm might lose if it lost one unit of labor or capital does not necessarily mean that we have identified the product that one unit is by itself responsible for generating.

Since, indeed, *ceteris paribus* is not *ceteris inefficacibus*, we have reason to question Clark's normative conclusion, to wit, that marginal products identify that which the supplier of a factor of production has the right to, on the grounds that it, and it alone, is responsible for the creation of that specific product. Clearly, that is not the case. In other words, since finding the marginal product of a factor is not the same as finding something created by that factor alone, Clark's implicit Lockean theory is in doubt. Neither the labor nor the capital created the product without the other. Indeed, this is something that Clark himself admits in his "primitive" scene:

Let a man fish from a dugout, with the simplest line and hook that he can make. The fish that he will bring to the shore are the product of labor and capital. Effort aided by instruments has secured them. How much of the catch is due to the man, and how much to the canoe and the fishing tackle? Not for his life can the man himself tell. Can he put the fish into two piles, and say, "This pile is due to my effort only, and that pile to my equipment? "

Every single fish is a joint product.... and the difficulty is that it is impossible to divide a single one of them into fractions due to the producing agencies. *Hopelessly merged with the product of capital is the product of the labor of an independent producer.* Instead of presenting the condition in which the wages of labor are readily distinguished from other incomes, and identified as the "produce of labor," such a primitive economy as actually exists is one in which it is impossible to say what the produce of labor itself is. (Clark, 1899/1965, p. 83, emphasis added)

In his social setting, however, he believes he has discovered a way to "disentangle" the products of each (by identifying his field of "no rent capital" in which we find a "zone of indifference.") But this is mere illusion; again, all he has discovered is the revenue the firm would lose, not what the specific unit has by itself created.

Further undermining his claim regarding the absence of exploitation in a capitalist economy is the normative assumption that the suppliers of capital deserve to have, as payments, the amount which a firm would lose if they lost a specific unit of capital. This is a contestable claim. Among other things, it ignores the question of the allocation of rights to capital and labor in the first instance. More specifically, it ignores the ethical question of whether the separation of laborers from capital – or from any “means of production” (that is, to speak of tools in general, regardless of the specific economic formation) -- is justifiable in the first instance. No one disputes that capital can make labor more productive. We don’t need imaginative renderings of savages fishing with canoes to see this. This nonetheless does not settle the normative question. That is, even if we could separately identify the additional fish that the canoe was specifically responsible for, the question still stands as to whom should get the fish. Arguing that it should go to the suppliers of the canoe already assumes into existence the (ostensibly ethically legitimate) institution by which the canoe suppliers are in a separate class from the laborers. And yet, as discussed above, this need not be the case. Other institutional forms are possible. In particular, the workers themselves could, as an institutional fact, own the canoes. And this precisely because, as Clark I clearly saw, but Clark II did not (or did only more dimly) the social world acts back upon our familiar savage, to facilitate a range of motivations, desires, predilections, etc. A cooperative ownership of capital by laborers, such as the sort discussed in above, is therefore hardly precluded by anything Clark finds in his “primitive” scene. (As an analytical matter, such institutional forms could not be so precluded; since there are no institutions whatsoever in the “primitive” world.)

Indeed, such an institutional form might better accord with justice if we recall that capital *itself* is nothing other than the product of labor. We can be reminded of this even simply by

journeying to Clark's own primitive scene. As we saw above, the savage, in determining the productivity of a unit of labor or capital, must measure such productivity by the labor expended on the production of capital. Repeating the relevant passage:

A man living in solitude and making all his own goods, by the aid of his equipment of working instruments, has to form some conception of the productivity of a unit of labor. He may have an hour which is available for fishing or for working on a canoe that will make future fishing more productive. An hour may be devoted to gathering fruits or to fashioning a spade, for working the soil and thus making food in the future more abundant. In making a decision between two such uses of his time and effort he measures, in his own rude way, the productivity of a unit of capital and that of a unit of labor. (Clark, 1899/1965, p. 48)

If the owners of capital did not, then, labor to create the capital, then one wonders how Clark's implicit Lockean justification for capitalist's earnings might apply. In Clark's "primitive" scene, one has Lockean justice, if for no other reason than that no one else is around other than our friend Robinson Crusoe; therefore, Crusoe himself must receive the entire product of his labor, whether produced with the assistance of capital or without. The social scene, on the contrary, allows for the possibility that the owners of capital goods did not themselves labor to create them. Indeed, in a capitalist economy, firms are structured such that the goods resulting from the production process (regardless of whether they are consumer goods or capital goods) are not the property of the laborers; they are the property of the owner of the firm. Hence, whatever Lockean justice may be readily at hand in Clark's primitive scene is immediately lost to us in his social scene of capitalist factor markets. Unlike in our discussion above, then, of the effect on worker productivity of wages, or on the basic *homo economicus* assumption, here, the relevance of the distinct character of the social setting is not in its *transformative* effect on so-called primitive laws. It is, rather, that the social scene he is examining simply does not deliver on

promises of “justice,” *even on Clark’s own terms*, given the separation of laborers from property claims to their labor.

To review our argument above: the analytical structure deployed by Clark in his later work makes an explicit distinction between “primitive” (natural) and social laws. The former laws are universal. The latter can only hold in particular social settings. However, by making the former foundational for the latter, Clark omits the possibility of the latter reflecting back on, and transforming, the former. I note two settings above in which this might be the case, namely, the effect of wages on productivity, and two, the effect of social relations on the purported ontological ground of *homo economicus*. Hence, though Clark would, at first glance, appear to avoid Walras’ confusion, he himself nonetheless winds up, at least in the sense described above, naturalizing what he otherwise claims to be social. And, although doing so allows him to claim that justice is immanent in nature (and manifest in competitive markets), it also eclipses from vision certain possibilities of transformation of capitalist market relations.

In addition, the very social scene that Clark analyzes, i.e., capitalist factor markets, undermines, rather than supports, his claims regarding distributive justice. If we take seriously Clark’s primitive economy, in which the owner of capital gets the additional produce of capital precisely because he labored to create it, the claim that capitalist factor markets reflect the same “just” outcome appears to be wanting, simply because the *sine qua non* of such markets is the dispossession of laborers from the ownership of capital.

We may, lastly, observe that, though Clark bears some similarity to Walras in conflating the natural and the social (despite himself), one key difference is that Clark’s conflation does not arise out of a concern with methodological monism. Unlike Walras, it appears to be of no interest to Clark to try to defend a project wherein the same methods of the natural sciences are

used for the social sciences. Such methodological self-reflection appears to be simply outside his consciousness. This, however, is decidedly not the case for the next author examined, William Stanley Jevons. As we will see, the question of methodological monism was, for him, paramount. Furthermore, it is his particular form of commitment to methodological monism that led him to a “mechanical” view of agency – i.e., precisely the sort of picture of agency that might eclipse our view of the kinds of potential for institutional transformation discussed above. It is, therefore, to this commitment, and to this view of agency, that we now turn.

CHAPTER 5

WILLIAM STALEY JEVONS: METHODOLOGICAL MONISM AND THE MECHANICAL AGENT

As we saw in the previous chapter, the Clark of the Christian Socialist period objected to “selfish” and “mechanical” representations of economic agents. And, although these sorts of objections no longer had a role in Clark’s later work, they can nonetheless repeatedly be found in subsequent economic thought. Indeed, not long after the publication of Clark’s “Philosophy of Wealth,” Alfred Marshall published his first edition of *Principles of Economics*, in which he registered a similar complaint:

Attempts have indeed been made to construct an abstract science with regard to the actions of an "economic man," who is under no ethical influences and who pursues pecuniary gain...mechanically and selfishly. But they have not been successful, nor even thoroughly carried out. (Marshall, 1890. p. vi)

Such complaints did not end with Marshall. For example, as we saw in the introduction, Joan Robinson charged mainstream economics with depicting persons as automata (and additionally claimed that the economics project of “social engineering” was predicated on this flawed view of persons) (Robinson, 1970, p. 120). Similarly, Katona (1975) argues that mainstream economics “...proceeds on the premise that human beings behave mechanically,” and, as such, are in effect “automatons”(p. 5). In other words, although the system is premised on the volition of individuals, ultimately, this volition is irrelevant, if psychology is conceived mechanistically. As Katona explains: “If human beings were automatons, so that the response to the same stimulus would invariably be the same, psychology could, indeed, be thrown overboard” (p. 5). Katona illustrates this point using the time-honored “law of demand”:

The so-called law of demand, expressed, for instance, as “the amount demanded increases with a fall in prices, and diminishes with a rise in price,” may serve as...an

example of the reification of economic concepts. That human beings create the supply of goods, form the demand for goods, and determine their prices becomes unimportant if a one-to-one correspondence prevails between the stimuli (price changes) and the responses (changes in amount demanded.) (p. 6)

Thus, ironically, though the choices of human beings are at the center of contemporary economic thought, those choices, in effect, become “unimportant.” Similarly, Fullbrook (2003) (in language especially relevant given our examination of Jevons below) argues that the neoclassical model of homo economicus treats “economic agents as though they were particles obeying mechanical laws...”(p. 1). And then there is Veblen’s quite vivid criticism of the “hedonistic man” of neoclassical thought, which is worth quoting at length:

The hedonistic conception of man is that of a lightning calculator of pleasures and pains who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. He has neither antecedent nor consequent. 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. Self-imposed in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before. Spiritually, 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 enforce upon him by circumstances external and lien to him. (Veblen, 1898, pp. 389-390)

According to this critique, our familiar neoclassical economic agent is not a “prime mover.” His behavior, rather, is governed solely by “stimuli that shift him about.” He is not the “seat of a process of living” but is, instead, passive.

One question to be examined here, then, is how we may have arrived at such a picture of agency in economic thought. The answer, we will discuss below, lies largely in the work of William Stanley Jevons. Before delving into Jevons’ texts, I should note here that the issue of Jevons’ mechanization of the economic agent has been explored in the literature at some length. Broadly speaking, two sorts of arguments can be found on this question. The first is that Jevons’

mechanistic view of decision-making can be seen in his adoption of Benthamite psychology, according to which actions are to be understood entirely in terms of stimulus-response (given the “masters” of pleasure and pain) and, accordingly, as essentially physiological responses. In this way, then, is the mind reduced to matter. The second argument focuses on in his writings on logic, wherein he claims that the “laws of thought” can be represented as the workings of a machine. I will review both these claims below. My intention, here, is not to add to the literature on the question of whether Jevons wanted to mechanize the mind. I take as persuasive such authors as have made the case. My purpose, rather, is threefold: first, to connect the Jevonian mechanical mind to Walras' overall system (as outlined above). Specifically, if we, today, live with the Jevonian conception of minds as mechanism, do we not risk eradicating Walras' person/thing distinction? Into which category, we might fairly ask, does the mechanized person fall? Recall that this distinction was essential to Walras' normative project. Absent the ability to treat human beings as "persons," no normative evaluations are possible. More specifically still, the content of Walras' normative evaluation was such that competitive markets yield justice in exchange because they are predicated on the political value of liberty over the disposal of private property. As much as everyone may enjoy the fraternity of a picnic, that fraternity, says Walras, constitutes a form of oppression when mandated by the state. Hence, to avoid this oppression, and to champion justice, we must insist on preserving the sphere of liberty over property in exchange. And yet, if the Walrasian system has come (through the importation of Jevonian mechanistic psychology) to interpret persons as a kind of machine, then of what precise value is this vaunted "liberty?" What rallying cry for liberty and justice can credibly be issued on behalf of beings who are mere stimulus-response mechanisms, or, at best, calculating machine-minds?

My second purpose is to return to the question of a transformational politics, and, specifically, the implications of mechanized agency for such a politics. As suggested in our discussions of Walras and Clark above, the tendency to naturalize that which is social tends to eclipse possibilities for transformational political change. But the mechanization of persons would seem, if anything, to dim such transformation prospects all the more. According to the standard neoclassical picture, economic man is sufficiently described with a utility function, insofar as the function depicts preferences (as inferred through behavior). However, although it is admitted (by the neoclassical view) that these functions can change, the question overlooked is: who is the agent responsible for changing these functions? In and through what process do people go about reconstructing their desires, self-conceptions and relationships with their community? On this question, the standard neoclassical paradigm is silent. The description of agency thus rests only at the surface level; it is, quite literally, superficial. It is the absence of any such deeper account, I suggest here, that can explain the perennial responses (noted above) to the neoclassical agent as “mechanical.”

Lastly, I want to relate Jevons’ mechanization of the agent to his methodological monism. As we saw in the introduction, methodological monism typically takes the natural sciences as paradigmatic for the social science. If, then, one additionally takes “mechanics” to be the paradigmatic example of natural science itself, one might very well model one’s social science as itself “mechanical.” This, we shall see, describes Jevons’ work.

This is all to be examined below. First, however, to contextualize Jevonian mechanization, it is worth returning to Walras, to examine his own use of the “mechanism” metaphor.

5.1. Walras and Mechanism

As we saw in chapter 2, Walras wanted to base his science of economics not only on the natural sciences generally, but on rational mechanics specifically. We noted this, for example, in his lecture “Economics and Mechanics.” Analyzing this lecture in somewhat greater detail, we can see in sharper relief Walras’ view of the relationship between his proposed “economics” and the science of mechanics. In his view, all sciences are properly “mathematical.” However, one can subdivide the (necessarily) mathematical sciences into two kinds, namely, the “physico-mathematical” sciences and the “psycho-mathematical sciences.” The science of “mechanics,” said Walras, belonged in the former category, while the newly-emergent science of economics belonged in the latter (“the first” of such sciences, he imagined, “of many to come.”) The former, said Walras, dealt with “exterior” facts as occurred in “Nature’s theater,” while the latter, on the other hand, dealt with “interior” facts, or “psychic” facts, which “...take place within us, where our sensibility is their theatre.” Hence, while the content for each is different (exterior vs interior, “nature” vs “psychic”) the two sciences, because of their mathematical character (and, in particular, their use of comparative statics) shared the same form. (Walras, 1909/1990, pp. 206-207)

Like Walras, Jevons similarly believed that his newfound science of “economics³⁴” must be quantitative. Indeed, Walras credits Jevons for this insight, beginning his “Economics and Mechanics” by approvingly citing Jevons’ proposition that “...our science [of economics] should be mathematical, for the simple reason that it deals with quantities” (cited in Walras, 1909/1990, p. 206). However, a statement like this creates an obvious problem, in that the

³⁴ In the preface to the second edition of the *Theory of Political Economy*, Jevons writes that he is substituting the term “economics” for “political economy” explaining that “I cannot help thinking that it would be well to discard, as quickly as possible, the old troublesome double-worded name of our Science” (Jevons, 1888, p xiii).

“quantities” at issue are not merely those of, say, commodities – but of utility itself. Hence, the question that seems to immediately present itself in the face of this claim regarding the quantitative character of economics, as Walras himself acknowledged, is how “a satisfaction may be measured.” (Walras, 1909/1990, p. 206)

Jevons himself was aware of the difficulty of such a question, acknowledging in his *Theory of Political Economy*³⁵ that “[m]any readers may... consider it quite impossible to create such a calculus [of pleasures and pains] as is here contemplated, because we have no means of defining and measuring quantities of feeling, like we can measure a mile, or a right angle, or any other physical quantity”(Jevons, 1888, p. 12). However, Jevons is not without a response to this anticipated objection. Indeed, as it turns out, he has more than one. To begin with, he admits that we can never have direct knowledge of an individual’s feelings of pleasure and pain, but must instead infer such feelings from their behavior. Jevons indeed goes so far as to claim that this method is no different than that in the natural sciences, wherein, for example, we do not directly measure gravity, but rather infer from its effects:

I hesitate to say that men will ever have the means of measuring directly the feelings of the human heart. A unit of pleasure or of pain is difficult even to conceive; but it is the amount of these feelings which is continually prompting us to buying and selling, borrowing and lending, labouring and resting, producing and consuming; and it is from the quantitative effects of the feelings that we must estimate their comparative amounts. We can no more know nor measure gravity in its own nature than we can measure a feeling; but, just as we measure gravity by its effects in the motion of a pendulum, so we may estimate the equality or inequality of feelings by the decisions of the human mind. (Jevons, 1888, p. 11)

Such an answer is reminiscent of contemporary so-called “revealed preference” theory. And yet, at the same time, Jevons by no means goes so far as to claim (as contemporary economists

³⁵ Below referred to as “TPE.”

might) that utility only refers to behavior, or even only to preferences.³⁶ On the contrary, Jevons holds onto – indeed insists on – a notion of utility as referring to objectively real (though subjectively experienced) feeling states of pleasure and pain. He approvingly quotes Bentham, claiming that he “comprehensively defines the term in question” with the following:

"By utility is meant that property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness (all this, in the present case, comes to the same thing), or (what comes again to the same thing) to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered." (Quoted in Jevons, 1888, p. 38)

According to Jevons, this definition as provided by Bentham “...perfectly expresses the meaning of the word in Economics, provided that the will or inclination of the person immediately concerned is taken as the sole criterion, for the time, of what is or is not useful” (Jevons, 1888, p. 39). Note here that the terms “benefit” and “advantage” amount to the same thing as “pleasure” or “happiness.” All these are evinced by the “will,” which in turn, as we saw above, is evinced by behavior. Hence is Jevons’ reasoning here predicated on inferences from (1) behavior to (2) desire to (3) utility/pleasure/happiness.³⁷

It is in this undaunted analysis of human psychology that we find what is perhaps most distinctive about Jevons’ contribution to neoclassical thought. That is, though, as noted

³⁶ Contemporary economic theory generally infers from behavior to preferences. The logic is familiar: if you choose bundle A over B when you could have chosen B, it must be because you preferred A. But little consideration is given to the ways in which desires may be more complex. For example, we are often creatures of habit. We may even want to change our behaviors. But this fact alone – i.e., the desire to change behavior -- indicates that behaviors may not always reflect desires (even when only examining the feasible set.)

³⁷ The history of the neoclassical theory of utility could be characterized as marked by changing views over whether we need to infer from (1) to (2) to (3), or only from (1) to (2). As the standard story has it (see, e.g., Hands, 2009), in the early neoclassical texts, we infer all the way to feelings/satisfaction/happiness. In the more modern versions, we abandon the hedonistic interpretation, and simply infer from behavior to preferences (i.e., desires/will.) With the revolution in behaviorist economics, we see a resurgence of the “hedonistic” conception of utility, since, absent such a conception, we cannot make claims about persons making choices (under constraint) that do *not* in fact maximize utility – i.e., absent the hedonistic conception, we could not argue that persons often simply do not act in ways that improve their welfare.

immediately above, Jevons and Walras shared a commitment to a new model of economics as quantitative, and as based on the science of “mechanics,” it is Jevons who takes the further bold step of analyzing individual psychology and feeling states.³⁸ That is, for Jevons, it is not merely market exchanges that can be conceived of mechanistically³⁹ – it is persons themselves. In his own words, the study of political economy is properly the study of “the mechanics of self-interest and utility”(Jevons, 1888, pp. xi- xii). Further still, Jevons does not merely analyze human psychology as one of many different components of political economy. Rather, he declares that such analysis is the “ultimate,” foundational object of the science of economics:

Pleasure and pain are undoubtedly the ultimate objects of the Calculus of Economics. To satisfy our wants to the utmost with the least effort—to procure the greatest amount of what is desirable at the expense of the least that is undesirable—in other words, to maximize pleasure, is the problem of Economics. But it is convenient to transfer our attention as soon as possible to the physical objects or actions which are the source to us of pleasures and pains. A very large part of the labour of any community is spent upon the production of the ordinary necessities and conveniences of life, such as food, clothing, buildings, utensils, furniture, ornaments, etc.; and the aggregate of these things, therefore, is the immediate object of our attention. (Jevons, 1888, p. 37)

We may pause briefly here to take note of how radical a departure is this vision of “economics” from previous schools of thought. Economics, it turns out, is not, after all, about the study of the object known as “the economy.” To the extent that economics studies, for example, “physical objects” produced by “labor,”(Jevons, 1888, p. 38) that is not because such

³⁸ This is not to say the matter is entirely ignored by Walras. Walras does, for example frequently refer to the notion of the “intensity of the last need,” which he dubs “rarite” (see, e.g. Walras, 1909/1990, p. 207). And, to be sure, for Walras, this too is a “feeling.” But Walras does not perform any kind of exploration of the psychology of these feelings, let alone of pleasure-pain calculations. It is left to Jevons, then, to depict for us the subjective experiences, and the underlying physiology of the utility-maximizing economic agent.

It should perhaps also be noted here that by no means is this the only difference between Jevons and Walras. At least as significant is Walras’ attempt, alone among the authors examined in this dissertation, to construct a theory of general equilibrium. (That specific question, though, is outside the scope of this our investigations.)

³⁹ Walras is in perfect alignment with Jevons on applying the metaphor of the “mechanism” to *exchange* (Walras, 1909/1990, p. 209). However, it is only Jevons that decides to mechanize *the agent himself*.

objects, or the labor embodied therein, or the production process, are fundamental objects of economics – rather, they are only important insofar as they serve (or not) to “maximize pleasure” (or minimize pain). Hence, for Jevons, economics is not about markets or commodities; still less is it about property or institutions. To the extent that we are justified in studying any of the latter, it is only insofar as we have properly “transferred” our attention from the “ultimate” economic objects to derivative ones.⁴⁰ Jevons’ distinctive contribution here, we may further note, not only sets him apart from, say, the classical school, but even his contemporary neoclassical pioneers discussed herein – i.e., Walras and Clark, neither of whom, their individualism notwithstanding, were ever so bold as to claim that all the rest of the economy is mere epiphenomena, and that the ultimate object of analysis for economists is the individual pleasure-maximizing agent.

5.2. The Calculus of Pleasure and Mechanics of Utility

What, then, can we say about this “calculus of pleasure” and these “mechanics of utility” which, for Jevons, is economics’ “ultimate object?” To answer, Jevons looks directly to Bentham. Jevons draws on Bentham’s own utilitarian calculus, which (notoriously) identifies seven qualities that bear upon the question of the extent of one’s pleasure or pain, to wit: (1) intensity; (2) duration (3) certainty or uncertainty (4) propinquity or remoteness; (5) fecundity (“the chance a feeling has of being followed by feelings of the same kind”) (6) purity (“the chance it has of not being followed by feelings of an opposite kind”) and (7) extent (“the number of persons to whom it extends, and who are affected by it”) (Jevons, 1888, p. 29). The last three are ruled out summarily by Jevons as not being relevant to economics, insofar as they bear more

⁴⁰ See, e.g., Schabas (1997), observing that, in the “Jevonian theory...the entire economy emanated from the mind, or rather the aggregate of independent minds” (p. 77).

directly on a utilitarian “theory of morals,” whereas economics only need concern itself with the “lower desires” of individuals. Hence does Jevons find most directly relevant Bentham’s first two features, namely, intensity and duration. Jevons’ procedure for employing these two features in his calculus is to imagine a constant unit of time (duration) for pleasure, and to assume that the intensity of pleasure decreases with each unit of time. This assumption allows him to produce the following graph (as depicted in TPE):

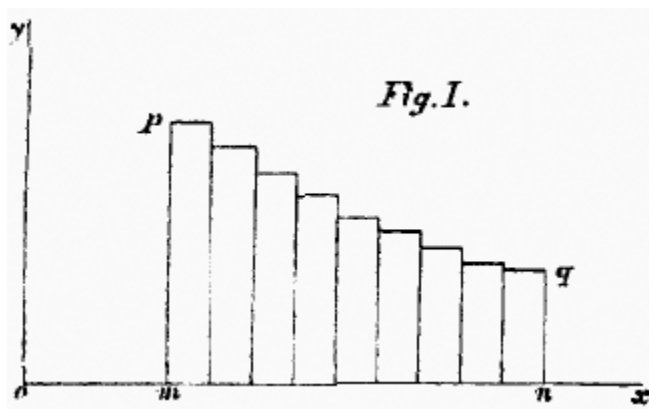


Figure 5.1. Jevons non-continuous graph of diminishing intensity of pleasure. From (Jevons, 1888, p. 31)

In figure 5.1, as Jevons explains, “along 0-X we measure time, and along...O-Y we represent intensity.” Hence, each of “...the rectangles between PM and OM represents the feeling of one minute” and the sum of these rectangles captures the “aggregate” amount of the feeling of pleasure in time period M-N (Jevons, 1888, p. 31). However, at the same time, Jevons claims that it is “artificial” to assume that pleasure intensity diminishes only in discrete units. Rather, he claims, we can assume that it diminishes continuously, and is hence representable as follows (in figure 5.2):

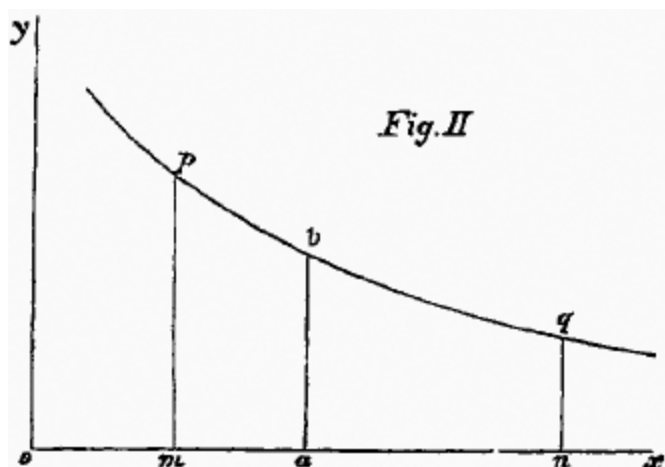


Figure 5.2. Jevons continuous graph of diminishing intensity of pleasure. (From Jevons, 1888, p. 31)

(Again, here the intensity of feeling is represented on the vertical, and time on the horizontal, with Jevons explaining that the “...feeling belonging to...time, ma, will be measured by the space mabp cut off by the perpendicular line ab”) (Jevons, 1888, p. 31). Here then we can already see the early instances of a form of analysis familiar to contemporary thought, namely, the use of continuous functions. This, in turn, for Jevons, creates the possibility of using the techniques of calculus, for which he expresses the greatest of admiration. While, as of the time of his writing, calculus was primarily used in physics, Jevons is confident that it belongs no less in the emergent science of economics. He explains: “...believing that the quantities with which we deal must be subject to continuous variation, I do not hesitate to use the appropriate branch of mathematical science, involving though it does the fearless consideration of infinitely small quantities” (Jevons, 1888, p. 3). (Indeed, Jevons’ project is nothing if not “fearless.”)

Also manifest here is the foundation for a theory of diminishing marginal utility. Utility, says Jevons, is the quality of an object serving “our purposes” insofar as it produces feelings of pleasure. Otherwise put:

Utility must be considered as measured by, or even as actually identical with, the addition made to a person's happiness. It is a convenient name for the aggregate of the favourable balance of feeling produced—the sum of the pleasure created and the pain prevented. (Jevons, 1888, p. 45)

Jevons then goes on to make the familiar claim that individuals seek variety in consumption. Consume too much of any one commodity, and utility will diminish. That is, the intensity of one's pleasure will diminish – just as we saw in figure 5.2 above. Hence, our graph of diminishing marginal utility looks strikingly similar to Jevons' graph of diminishing intensity of pleasure, as follows:

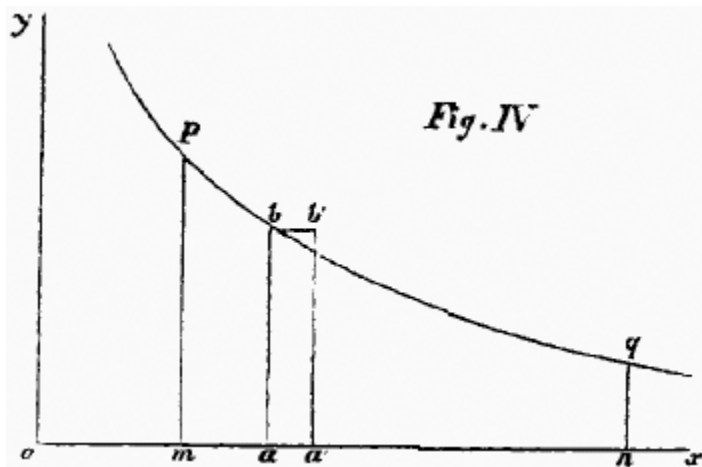


Figure 5.3. Jevons graph of diminishing marginal utility. From (Jevons, 1888, p. 49)

Here, Jevons places a commodity, food, on the horizontal axis (o-x), and utility on the vertical axis. Jevons then reinforces his “fearless” procedure of using infinitesimally small quantities by explaining that “the degree of utility is...properly measured by the height of a very narrow rectangle [such as that defined by the region a-b-b'-a'] corresponding to a very small quantity of food, which theoretically ought to be infinitely small” (Jevons, 1888, p.49).

Again, of special import here is the premium Jevons places on the conception of the feeling states of pleasure and pain in the construction of our concept of utility. It is the former that are foundational (while all other theoretical objects in economics are merely derivative.)

5.3. The Material Basis for the Mind

Because feelings are the predicate for the rest of Jevons' analysis, feelings themselves warrant further scientific explanation. As scholars of Jevons have demonstrated (White, 1994; Maas, 2005), such explanation lies in the realm of the physiological. Note already the distinctive move here. Walras, for example, declared his interest in "psychic" facts as an essential part of the sphere of political economy. But never did he discuss, let alone express a desire to understand, such mental states specifically in bodily or physiological terms. Jevons, in contrast, has no such compunction. For example, Jevons commends the work of Richard Jennings, who, in developing his "law of utility," set out the "physical groundwork of Economics, showing its dependence on physiological laws." (emphasis added). Jevons then goes on, in admiration, to quote Jennings at great length. In particular, we may note here Jevons' choice to highlight Jennings discussion of utility in terms of sensation. Indeed, Jevons relies on Jennings' approach to the question of sensation to link up the theory of diminishing intensity of pleasure over time with that of diminishing marginal utility in consumption:

...it is but too well known to every condition of men, that the degree of each sensation which is produced, is by no means commensurate with the quantity of the commodity applied to the senses. . . We may gaze upon an object until we can no longer discern it, listen until we can no longer hear, smell until the sense of odour is exhausted, taste until the object becomes nauseous, and touch until it becomes painful; we may consume food until we are fully satisfied, and use stimulants until more would cause pain. On the other hand, the same object offered to the special senses for a moderate duration of time, and the same food or stimulants consumed when we are exhausted or weary, may convey much gratification. If the whole quantity of the commodity consumed during the interval of these two states of sensation, the state of satiety and the state of inanition, be conceived to be divided into a number of equal parts, each marked with its proper degrees of sensation, the question to be determined will be, what relation does the difference in the degrees of the sensation bear to the difference in the quantities of the commodity? First, with respect to all commodities, our feelings show that the degrees of satisfaction do not proceed *pari passu* with the quantities consumed; they do not advance equally with each instalment of the commodity offered to the senses, and then suddenly stop; but

diminish gradually, until they ultimately disappear, and further installments can produce no satisfaction (Quoted in Jevons, 1888, p. 56)

First, then, note that Jennings' description of the increasing or decreasing "degrees of satisfaction" well-supports Jevons' preferred methodological approach discussed above, i.e., the use of the calculus. Prior to the kind of physiological-based notion of utility adopted by Jennings, utility, although partly conceived of as a question of degree, was also conceptualized as lexicographic. It was hierarchical. Needs and wants were in separate categories. But such a categorical distinction was no longer needed once all desires could be framed as a question of degrees of pleasure (or of avoidance of pain.) As White (1991) explains: "The analytical significance of the commodity hierarchy was thus reduced to differences in the "quantity of sensations"" (p. 203). Hence, following this analysis, the degree of utility one received was purely a function of "quantity" not of kind – and hence in the aforementioned analysis of sensations could Jevons find a suitable ontological foundation for his championed quantitative method.

Second, making this physiology the ultimate ground for his methodological approach in turn implies that the decisions of economic agents are properly understood as a stimulus-response mechanism – i.e., as responses to pleasures and pains (in accordance with the aforementioned physiological laws). And such a result is precisely what Jevons wanted, given his reliance on Bentham, whom he also quotes at length, and with approval, regarding the individual agents' "subjection" to the "masters" of "pleasure and pain." The relevant passage Jevons cites is:

Nature...has placed mankind under the governance of two sovereign masters—pain and pleasure. It is for them alone to point out what we ought to do, as well as to determine what we shall do. On the one hand the standard of right and wrong, on the other the chain of causes and effects, are fastened to their throne. They govern us in all we do, in all we say, in all we think: every effort we can make to throw off our subjection will serve but to

demonstrate and confirm it. In words a man may pretend to abjure their empire; but, in reality, he will remain subject to it all the while. (Quoted in Jevons, 1888, p. 24)

Hence, from Jevons' Benthamite perspective, individuals are subject to the sovereign masters of pleasure and pain. And yet, as noted at the outset, we find ourselves in an odd position choosing such a slavish agent as our champion of political liberty. What bourgeois revolution could be launched on behalf of such a passive being? Is the "will" nothing other than responses to pains and pleasures? Does our own folk-psychology not include a notion of "will" that entails the possibility of self-mastery, such that we are not mere bundles of stimulus-response, but something with the capability of acting otherwise? Is this indeed, not the real power of the "will"? If so, then this arguably explains the objections (as noted at the outset of this chapter) by the likes of Marshall, (early) Clark, and Robinson, regarding mechanical representations of the agent -- i.e., that such representations, ironically, do a disservice to the very will they purport to defend.

5.4. The Mechanical Representation of the Mind

In addition to treating the mind as a stimulus-response mechanism, we can identify one other sense in which Jevons is said to have "mechanized" the mind. In contrast to our discussion above, this second sense relies not on his treatment of minds as pure stimulus-response machines, but of his treatment of actual machines as potential minds. Specifically, Jevons argued that machines could perform processes otherwise regarded as purely "mental." Hence, for Jevons, if one could show that mental processes could be carried out by machines, then we need not take note of anything specific called the "mind" in science. Instead, in this manner, Jevons could erase any qualitative distinction between the two.

The story is documented elsewhere, including by both Maas (2005) and Mirowski, (2001). To recount it briefly here: Jevons believed that a machine could reproduce the logical

reasoning of the mind. Indeed, he proposed just such a “Logical Machine,” which he described as follows:

The logical machine ...is an analytical engine of a very simple character, which performs a complete analysis of any logical problem impressed upon it. By merely reading down the premises or data of an argument on a key board representing the terms, conjunctions, copula, and stops of a sentence, the machine is caused to make such a comparison of those premises that it becomes capable of returning any answer which may be logically deduced from them. It is charged, as it were, with a certain amount of information which can be drawn from it again in any logical form which may be desired. The actual process of logical deduction is thus reduced to a purely mechanical form, and we arrive at a machine embodying the Laws of Thought.... (Jevons, 1890, p. 144)

Essential to understanding these “laws of thought” is what Jevons calls the “substitution of similars.” Jevons repeatedly expresses the paramount role of this principle, calling it “the true principle of reasoning” (Jevons, 1879, p. 75) or the “supreme rule of inference”(Jevons, 1874, p. 21). In short, the principle expresses that, given any two objects that are “like or equivalent in sufficient degree” we can substitute one for the other in any logical statement. And that is because, “existing in any two objects” which are so sufficiently similar, there exists a “power of mutual replacement” (Jevons, 1874, p. 21). In expressing this principle in general terms, he asks us to consider:

...the exact sameness expressed in the form $A=B$. Now if we take the letter C to denote any third conceivable object, and use the sign ∞ [in the] meaning of indefinite relation, then the general formula of all inference may be thus exhibited :

— From $A = B \infty C$ we may infer

$A \infty C$

or, in words:

— In whatever relation a thing stands to a second thing, in the same relation it stands to the like or equivalent of that second thing. (Jevons, 1874, p. 21)

As seemingly straightforward an approach as this was to the question of formal logic, it was open to one important criticism – namely, how to decide when an object was sufficiently “similar” to warrant substitution? This sort of criticism, indeed, was, directed at Jevons himself (Maas, 2005; Spiegler, 2012). To take but one example, John Herschel,⁴¹ in a letter to Jevons, wrote:

...the difficulty of reasoning correctly lies not in the mechanical application of logical formulae . . . but in the application of reason and observation to decide what things are similar: so similar as to admit of substitution for each other in the argument at hand. (Cited in Maas 2005, p. 148)

Indeed, the initial decision regarding sufficient similarity may be so essential a component of reasoning that there can be no successful mechanization process “embodying” thought in its absence. In other words, attempting to duplicate thought, in a machine, without capturing this step, leads to a machine logic that is, in a word, too “mechanical.”

5.5. Jevons and Methodological Monism

Of what consequence, though, is it if we can successfully embody thought in a machine? It would seem that, at stake here is the question of whether both machine reasoning and human reasoning could be accounted for by recourse to the same rules. In other words, if this project were successful, then, as Maas (2005, p. 138) put it, there would be no need for any “categorical distinction” between mind and matter. Of course, the absence of such a categorical distinction provides for the possibility of methodological monism. That is, if both mind and matter are in essence the same, then one can justifiably proceed by analyzing them both according to the same

⁴¹ Herschel was a 19th century scientist, who wrote on subjects ranging from scientific methodology and logic to meteorology (Maas, 2005, p. 53, 88).

method. And this, indeed, was Jevons' position. This commitment to methodological monism appears throughout his work. For example, in TPE, he writes:

It is clear that Economics, if it is to be a science at all, must be a mathematical science. There exists much prejudice against attempts to introduce the methods and language of mathematics into any branch of the moral sciences. Many persons seem to think that the physical sciences form the proper sphere of mathematical method, and that the moral sciences demand some other method,—I know not what. (Jevons, 1888, p. 3)

For Jevons, then, it is not merely necessary to construct the “moral sciences” adopt the same approach as the “physical sciences” – it is quite literally unimaginable to do otherwise. Furthermore, if anything, the questions posed by the moral sciences compels such a result:

The application of Scientific Method cannot be restricted to the sphere of lifeless objects. We must sooner or later have strict sciences of those mental and social phenomena, which, if comparison be possible, are of more interest to us than purely material phenomena. (Jevons, 1874. p. v)

Note additionally that we can in the above passages observe the hallmarks of methodological monism as discussed in the introduction. In particular, note how Jevons' claim here is not merely that both the natural sciences and social sciences should use the same method; it is that the social sciences should borrow from the natural sciences. As we observed in the introduction, from the methodological monist or naturalist standpoint, the natural sciences are paradigmatic for the social sciences. Now, if, along with this, we consider that, for thinkers such as Jevons in the 19 century, rational mechanics was itself the paradigmatic science for the natural sciences, then it becomes clearer how Jevons came to use the frame of the “mechanical” as fundamental in elucidating his science of “economics.” That is, a focus on the mechanical becomes a consequence of his commitment to methodological monism.

Indeed, Jevons was quite explicit about modelling his economics on rational mechanics. In the Preface to the Second Edition of TPE, he writes: “The Theory of Economy thus treated presents a close analogy to the science of Statical Mechanics, and the Laws of Exchange are

found to resemble the Laws of Equilibrium of a lever...” (Jevons, 1888, p. vii). He then sets out to demonstrate as much. More specifically, Jevons observes, between his “laws of exchange” and the mechanics of a lever, a formal isomorphism. Exchange, Jevons claims, can be described as follows:

$$\frac{\Phi_x}{\psi_y} = \frac{dy}{dx} = \frac{y}{x}$$

As Jevons explains, the first term represents “finite expressions for the degrees of utility of the commodities Y and X” (Jevons, 1888, p. 105). In other words, it is simply the ratio of the marginal utilities. The second term is the marginal rate of substitution. Hence, we have the familiar claim that the ratio of marginal utilities equals the marginal rate of substitution (MRS) (which, in turn, will equal, for any quantities Y and X, the ratio Y/X.)

Jevons then analogizes this relationship to the mechanics of a lever. Wulwick (1990) produces the following diagram by way of illustration of Jevons’ procedure:

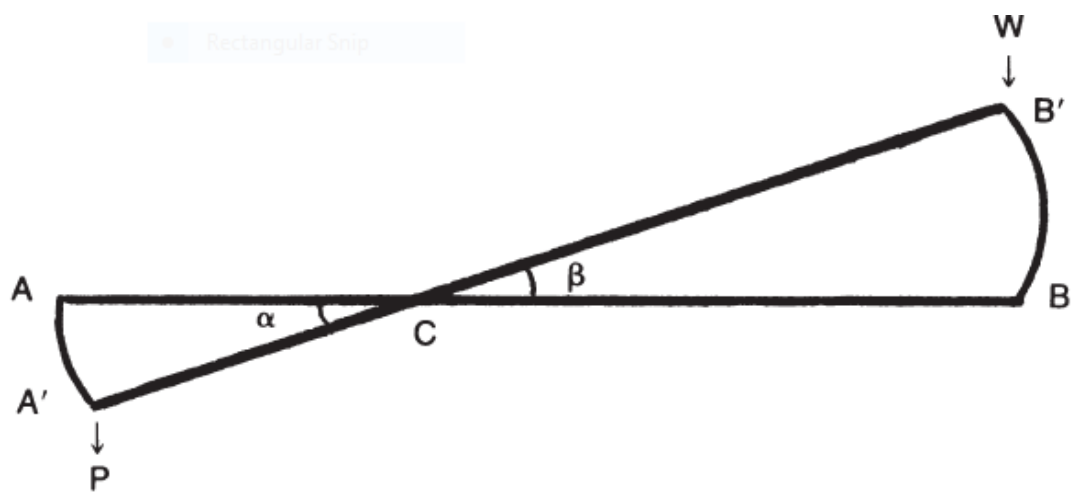


Figure 5.4. Representation of Jevons’ Lever. From Wulwick (1990) p. 219

Wulwick then goes about describing Jevons' conception of the relationship between the mechanics of a lever and economics. To recapitulate here, Jevons quotes "Mr. Magnus' Lessons in Elementary Mechanics" by way of description of the mechanics of a lever (as illustrated in figure 5.4 above.) Length A-B is the lever. W and P are weights or forces, where P is "...the force applied at A, and W the force exerted, or resistance overcome...at B," and the lever is displaced from the horizontal by the distance A-A' and B-B' (Jevons, 1888, p. 102). The issue is to analyze the movement of the lever in terms of the work performed by P and W. Jevons reproduces the mechanical law (again, from the "Elementary Mechanics" text) that

$$\frac{W}{P} = \frac{AA'}{BB'} = \frac{AC}{BC}$$

That is, the ratio of the forces W and P equals the ratio of the respective displacements, which in turn equals the length of each "arm" (i.e., the distances from the fulcrum at the center of the bar to each end). Jevons, to illustrate the isomorphism between rational mechanics and his newly-created economics, then places the equations of exchange directly above the equation describing the mechanics of the lever, as follows:

$$\frac{W}{P} = \frac{AA'}{BB'} = \frac{AC}{BC}$$

$$\frac{\Phi_x}{\psi_y} = \frac{dy}{dx} = \frac{y}{x}$$

Although not stated outright, Jevons appears to be suggesting here that changes in utility drive the process of exchange, just as changes in force drive the movement of the lever. Change the ratio of the marginal utilities, and the marginal rate of substitution changes as well – and hence (presumably) would any exchange observed in the market. To drive the point home, he produces the following graph, placing the appropriate terms from his equation of exchange:

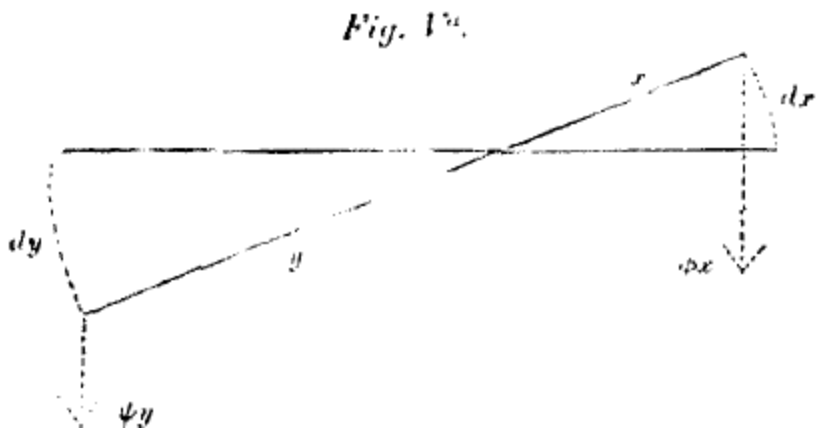


Figure 5.5. Jevons' "Mechanics of Exchange" depicted as a lever. From Jevons (1888, p. 106)

Note that the marginal utility of Y moves the metaphorical lever of exchange the distance dy , and the marginal utility of X moves the lever the distance dx . Hence is Jevons visually representing the marginal utilities as doing the "work" of exchange. Although Jevons never explicitly states as much, there appears to be a clear implication to this curious exercise – namely, that this demonstration confers legitimacy on his proffered method in "economics." As Wulrick (1990) observes "To convince readers and critics that his economics was scientific, he would show that economics was like physics, in particular, rational mechanics" (p. 219)

Further, as suggested above, it is in the light of this attempt at legitimization through reliance on the science of mechanics that we can understand Jevonian mechanization of the agent – that is, it arises out of this advocacy of a certain form of methodological monism, wherein the specific natural science of mechanics serves as the model for the social sciences. Further still, like Walras, it appears to arise out of the search for some natural ground (in the social world) to justify the application of the method of the natural sciences (i.e., it arises out of the desire to find a substantive naturalism to justify the formal naturalism.) However, whereas Walras found his natural ground in the claim that exchange-value was a "natural fact," Jevons relies on other

candidates, namely, (1) the physiological basis for individual pleasures and pains, and (2) machines, insofar as they have the capacity to embody the “laws of thought.” Jevons’ search for a natural ground for his methodological monism, then, leads him not merely to naturalize social relations (as did Walras) but to mechanize the individual economic agent himself.

Hence can the objections to the neoclassical agent as excessively “mechanistic” be traced to the emphasis placed, in early neoclassical thought, on the role of rational mechanics as the paradigmatic science (upon which to base the moral sciences.) In Fulbrook’s language, “...the neoclassical atomistic *homo economicus* [is] a conceptual Frankenstein [insofar as] the idea was fabricated...to serve the dream of constructing models in the economic universe in the image of Newtonian mechanics” (2003, p. 1) Abandoning that dream, then, might permit us to construct different notions of agency. We might, that is, be able to go beneath the surface-level (at which desires, pleasures, and pains are taken as fundamental data for understanding the economy as a whole) and look for an account that takes seriously the ability of agents, within specific institutional settings, to alter those desire and pleasures/pains. Such an account might well support the possibility of the kind of “transformational politics” discussed above. It is to such an account that I now turn.

CHAPTER 6

CONCLUSION: A “POLITICS OF THE SUBJECT”

We saw in the immediately preceding chapter that Jevons’ conceptualization of economics as the study of the “mechanics of utility and self-interest” depended in large measure on the strict hedonistic interpretation of the notion of utility. Today, of course, such an interpretation is in dispute. Given the conceptual difficulties posed by Benthamite psychological theory, neoclassical economics, at least for most of the 20th century, discarded the hedonistic interpretation, and instead interpreted utility as a representation of preferences. Such preferences, in turn, are read off of behavior. That is, the behavior of an individual is said to reveal their preferences. More recently, however, some economists have argued for a return to the hedonistic conception (see, e.g., Bruni & Sugden, 2007); for, in the absence of that interpretation, it is harder to make conclusions about welfare. (If we take seriously the notion that people may act on their preferences and yet nonetheless be *unhappy*, then the removal of the hedonistic conception significantly undermines prospects for welfare economics.) However, even in our contemporary pared down version, where we (sometimes) make no claims about “satisfactions” or “pleasures and pains,” we still, it would seem, have a picture of a mechanistic agent. The agent has a utility function. This function describes preferences, which we are to infer from behavior. But, as we noted in the preceding chapter, such a picture of agency is superficial. For, if indeed people can *change* their preferences, then the question arises as to precisely *who* is responsible for that change. Such a person cannot, as a logical matter, be represented by the utility function itself. It is someone, as it were, deeper down.

And it is this evolution, transformation, and continually critical self-reflection engaged in by such persons that we may need if we wish to see a politics of transformation. If, that is, an

individual acting according to the standard *homo economicus* picture might, at some point, start to *behave otherwise*, then we need an account of agency that allows for such a possibility.

Such an account, I suggest here, can be found in the work of JK Gibson-Graham. Gibson-Graham has set out a project of creating a “politics of the subject.” Gibson-Graham defines this politics as something that “involves the active and somewhat scary sounding process of ‘resubjectivation’ – the mobilization and transformation of desires, the cultivation of capacities, and the making of new identifications with something as vague and unspecified as a ‘community economy’”(Gibson-Graham, 2006, p. xxxvi). Creating this sort of politics could serve to create the space for an image of economic agency that transcends the “selfish and mechanical” image criticized by Clark I. Indeed, our examples of the transformation of *homo economicus* as discussed above in chapter 4 can well be conceptualized in terms of this proposed “politics of the subject.” A decision, for example, to form a worker cooperative requires, in part, a kind of shift in one’s very own identity. Taking as an example the movement of unemployed workers in Argentina to collectively take over and manage factories, Gibson-Graham explains:

When unemployed workers in Argentina took over abandoned factories after the economic crisis of 2001, the obstacle they encountered was not the state or capital—which were, after all, in disarray—but their own subjectivities. They were workers, not managers or sales reps or entrepreneurs, and as one of them said, “If they had come to us with 50 pesos and told us to show up for work tomorrow, we would have done just that.” Instead, for lack of an option, they found themselves recreating Argentine manufacturing. Just as they had formerly constituted a capitalist economy through their identifications and daily practices as workers, so they are now constituting an economy and sociality of “solidarity” as members of the unemployed workers’ movement (MTD). That this requires “a struggle against themselves” is one of their principal tenets and observances.(Gibson-Graham, 2006 p. xxxv)

But, of course, the possibility that one can “struggle against oneself” requires that there be a “self” that is *actively engaged* in that struggle. Furthermore, to “struggle against oneself” logically implies a *split* in the self. There must therefore exist some kind of agent *beneath* the

mere range of behaviors definable in terms of a utility function. (Under the mechanical view of agency, only the latter is visible as a “self” and hence a “struggle against oneself” is conceptually incoherent.) One must, that is, in addition to having mere preferences, also have some set of desires *regarding* those “preferences.” But this in turn renders the standard neoclassical picture insufficient. To put the matter in Jevonian hedonistic terms, if we can *shift* that which we find “pleasurable” or “painful,” then such pleasures and pains do not entirely function as “masters;” rather, through the “struggle against oneself” we may, at least to some degree, come to “master” them as well.

6.1. Naturalized “Politics” re-visited

It is through processes as these, I am suggesting here, that the possibility of institutional transformation can be glimpsed. Recall that Walras’ view of “politics” relied on the conceptualization of the economic system as akin to a natural one, such that it could be manipulated, by a class of policymakers, in Baconian fashion, to meet desired social ends. This conception, I suggested, implied a limited view of social change, overlooking a vision of such change as arising, as it were, from *within* extant institutions. Gibson-Graham’s vision of a politics of the subject may serve to fill in the gap in the Walrasian political vision.

And yet, it is not only the case that a politics of the subject can create transformational possibilities where the naturalistic view of politics fails to see it; it is that the naturalistic view stands as an *obstacle* to such a politics. As Gibson-Graham explains, the reluctance of agents to imagine a reconstruction of their economic identities is due precisely to their sense of the *naturalness* of the economic relations in which they are situated. In their research on the politics of the subject, Gibson-Graham (2006) conduct interviews in the Latrobe Valley of southeastern Australia, “...an area with abundant brown coal resources...where the bulk of the state of

Victoria's electricity has been generated since the early 1920s" (p. 25). Unfortunately, they explain, "as a result of massive retrenchments in the electricity and mining industries and the privatization of the State Electricity Commission of Victoria during the 1990s, the valley has undergone a prolonged period of high unemployment." The capacity of individuals, however, to imagine alternative possibilities, they found, was thwarted by:

... a widespread belief in the naturalness of 'what the valley economy was' that seemed to stand in the way of any micropolitical receptivity to new becomings....The 'natural' and the 'real' seemed to offer both obstructions to movement and a continued subjection that was problematic, but nevertheless embraced. (Gibson-Graham, 2006, p. 25)
Hence, a politics of the subject is not merely a possible *remedy* for the naturalized view

of the economy (on which Warlas' Baconian vision of social change rests); it is also, simultaneously, *obstructed* or *frustrated* by that very vision. One might say, then, that this naturalistic vision has ideological effects. It purports to mark out the extent to which economic relations must hold true – even if only under certain conditions (i.e., a set of institutions.) In fact, however, it functions as a means of *ensuring* that such relations hold true – that is, it *creates* that which it purports to merely (objectively) describe.⁴²

If, then, we want to take seriously the possibility of altering socio-economic relations otherwise deemed "natural," then we may benefit from an analysis of the possible origins of these tendencies towards naturalization. Hence, the significance of the foregoing analysis of

⁴² It is also the case that a transformational politics –i.e. set of practices whereby institutions are transformed from within -- can serve as a form of *evidence against* naturalist claims about economic processes. That is, such practices can undermine any claims of "ineluctability" regarding economic processes. For example, Lacey (1998) (without using the term "naturalism") makes this argument. He imagines that "p" stands for the proposition that "There are no significant viable possibilities in the foreseeable future, for the more widespread achievement of human wants and for the satisfaction of human needs outside of neoliberal structures" (p 492). Relevant evidence supporting the proposition "not p," he says, could be found in "groups on the margins of the predominant structures." These groups transform institutions "'step by step' in an unfolding process of development in which there is an organic unity between means and ends, and between ameliorative action and praxis for social transformation." As an example, Lacey says he "has in mind...new social movements...in Latin America" (p 493). These movements do not effect wholesale transformation of institutional structures in, as it were, one fell swoop, but rather through "ameliorative" practices that, through a "step by step" process, may ultimately transform society. That is, they are attempts to transform society from within. To the extent they are successful (even in "step by step" ways) they may serve as data against various kinds of naturalist claims.

Walras, Clark, and Jevons, whose texts constitute, even if in only in partial measure, those origins. Each of these authors, in their own distinctive way, argued that there was some sort of “natural” ground to the social relations they analyzed; and, consequently, that the potential to change such relations were limited by that ground. For Walras, as we saw, exchange-value was said to be a naturally determined fact, even though its existence depends on social institutions. The economic laws of the market were, for him, inexorable; they constitute constraints on political change. The business of “politics” (with respect to economic matters) is to take economic laws as given, and manipulate them to desired ends; no consideration is given to the possibility of shifting the character of laws themselves. Similarly, for Clark, the determination of wages by marginal productivity means that any attempt to raise the living standard of workers through minimum wage laws will necessarily create unemployment. Nothing, for Clark, about the distinctly social character of markets, for him, (sufficiently) shifts the a-social, universal economic laws purportedly serving as their foundation. And Jevons, as we saw, because of his methodologically monist commitment, and his esteem for mechanics, created a “mechanical” view of agency – i.e., one with no account of how agents might *change* the character of their relations to other agents or objects in “the economy.”

Of course, if economic relations were deemed “just,” then we’d have no concern for any such change. Rather, “natural” laws would, in addition to holding as a matter of necessity, simultaneously deliver on the promise of justice. In their distinct ways, this was the position taken both by Walras and Clark. As we saw, though, making claims about what economic relations *should* or *should not* hold true while simultaneously insisting that, to some extent, they are natural, and hence *must* (as a matter of necessity) hold true, creates a potential theoretical problem. This, as we saw, was especially the case with Walras, who argued both that (a)

exchange-value and its governing laws were natural and (b) that claims about justice must be reserved for non-natural phenomena.

Apart from the question of the logical consistency of these claims, there is, at the same time, the question of whether the capitalist market does indeed deliver on justice. Walras believed it did, because, under perfect competition, the market value of each agents' commodity bundle does not change with exchange (although each individual's subjective utility increases.) This, in effect, preserves their rights in their property. As to whether such property was acquired justly in the first instance, this was left to Clark to demonstrate. He, as we saw, wanted to show that capital and labor each received income in proportion to their contribution to production. However, his argument was flawed, both because it assumed that one can separate out the portion of the product solely attributable to capital from that solely attributable to labor, and also because it implicitly assumed that any institutions separating the suppliers of labor from the those of capital were themselves just. Neither assumption, as we saw, has merit.

Furthermore, Clark's theory of justice was predicated on a theoretical structure wherein the distinctively social character of social laws is obscured; rather, in this structure, the "primitive" laws of the wilderness are regarded as the "essence" of social laws. This, as we saw, precluded him from (1) imagining that productivity might be a function of the wage (in which case it becomes incoherent to claim that the capitalist market apportions income based on productivity) and (2) that firms might self-consciously want to change their practices to accord with what they believe is "just" -- perhaps indeed in accordance with the view that ownership of capital by the workers better accords with criteria for justice than the purported fairness in distribution in capitalist factor markets (purportedly based on productivity.)

Hence, it seems, after all, that the capitalist marketplace may not, through some natural law, deliver on the promise of justice; quite the contrary. It may be both “artificial” and, in important respects, unjust. If so, then, as we saw immediately above, the first step towards transforming it is by piercing through the veil of the “natural.” At such point, we might discover ways in which we alter our own subjective orientation towards the economy (as suggested immediately above by Gibson-Graham), and begin the slow and difficult task of reconstructing institutions. It is such a task I hope to have laid a (partial) groundwork for in all the above.

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