

## Toward an Evolutionary and Moral Science

### *Remarks upon Receipt of the Veblen-Commons Award*

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**Abstract:** Thorstein Veblen asked in 1898 why economics is not an evolutionary science; he also proposed a Darwinian paradigm shift for economics. Among the implications reviewed here, was his claim that Darwinian principles applied to social entities as well as to biological phenomena. It is also argued that economists have additional reasons for taking Darwinian evolution seriously. Recent work on the evolution of altruism, cooperation and morality show that we are on the brink of developing an evolutionary-grounded theory of human motivation that breaks from the selfish utility-maximizer lambasted by Veblen. This new theory accepts a biological as well as a cultural foundation for moral dispositions. As noted here, the neglected British institutional economist John A. Hobson – who was an acquaintance of Veblen – foreshadowed this approach.

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It is a very great honor to receive this award. I feel incredibly fortunate to follow Clarence E. Ayres, Morris A. Copeland, Gunnar Myrdal, John Kenneth Galbraith, Adolf Lowe, Robert Heilbroner, Hyman P. Minsky, Richard R. Nelson, and many other inspirational economists. I wish to thank most deeply everyone involved in this decision.

I am also pleased to receive this award in Chicago. The University of Chicago is historically important for its institutionalism as well as its monetarism. As Malcolm Rutherford (2011, 125) puts it in his excellent history: “Chicago has a strong claim to be seen both as the birthplace of what became to be known as institutional economics and a place from which institutionalism spread to other institutions.”

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My academic contribution is tiny, but it would be neither gracious nor diplomatic for me to question in public the wisdom of choosing me for this award. I will suspend my critical faculties and quickly pass on to another feature of this choice. Among the 42 illustrious previous recipients of this award, only three were born outside of North America. They are Adolf Lowe (born in Germany), Gunnar Myrdal (born in Sweden), and my friend Geoffrey Harcourt (born in Australia). That makes me the third European. I am pleased to increase my continental quota by 50%. I thank the nominating committee for its wider vision. I look forward to the first winners from Asia, Africa or Latin America, and to more women recipients than the two so far.

You may wonder, with Europe in its current mess, what can it teach Americans about economics? Europeans are making many mistakes. If European politicians had considered more closely the chartalist or state-theory of money while setting up the European single currency in the 1990s, then they would have understood more clearly that the Eurozone would not work unless it entailed a much stronger fiscal and political union, with a much stronger European Central Bank. They would have either abandoned the planned Euro or put in place the required federal institutions to avoid the crisis that we are in now.

So can we learn anything from European institutions and policies? According to the United Nations Human Development Report for 2009, within the 22 most highly developed countries, those four globally with the lowest income inequality were Denmark, Finland, Norway and Sweden.<sup>1</sup> It is in the Scandinavian homeland of Myrdal and of the parents of Thorstein Veblen that inequality is at its lowest in the developed world and the welfare state is most highly developed.

Having pleaded that Europe is not all bad, I turn to some ideas from that man of Norwegian descent. Veblen (1898a) asked “why is economics not an evolutionary science?” This prize is awarded by the Association for Evolutionary Economics. In the remainder of my talk I consider how evolution can inform our understanding of human motivation and help transform economics.

### ***Economics as an Evolutionary Science***

Americans have a problem with evolution. A 2005 Gallup poll of Americans found that 53% expressed their belief that God created human beings “exactly in the way the Bible describes it,” with 65% sympathetic to creationism (Wikipedia 2011).

In Europe our evolution from ape-like ancestors is much more widely accepted. Another report found that more than 70% of respondents in Denmark, France, Germany, Italy, Spain, Sweden, UK, and other countries agreed that humans had evolved from earlier species of animals. For the United States, the quoted figure was 40% and falling (Hecht 2006).

But “evolutionary economics” means much more than an acceptance of human evolution. It means an emphasis on change, and on technology as one of the main drivers of economic development. In addition, when Veblen proposed that economics should be an evolutionary science, he specifically mentioned the role of Darwinism.

For Veblen (1908, 399-400), Darwinism involved the rejection of teleological reasoning in favor of a detailed analysis of cause and effect. Accordingly, Veblen followed pragmatist philosophers such as William James and John Dewey in rejecting explanations of human conduct based on reason and deliberation alone. These too had to be explained, and this was partly through the psychological concept of habit. As Darwin wrote in 1856: "Men are called 'creatures of reason,' more appropriately they would be '*creatures of habit*'" (Darwin 1974, 84, 115). As Charles Sanders Peirce (1878, 294) declared, the "essence of belief is the establishment of habit." Accordingly, Veblen (1907, 308) saw the critical implications of Darwinism for a theory of mind and behavior:

Under the Darwinian norm it must be held that men's reasoning is largely controlled by other than logical, intellectual forces . . . opinion is as much, or more, a matter of sentiment than of logical inference; and that the sentiment which animates men . . . is as much, or more, an outcome of habit and native propensity as of calculated material interest.

For Veblen this implied a critique of the theory of human motivation in both Marxism and neoclassical economics.

For Veblen the core Darwinian principles of variation, selection and information inheritance apply to social entities as well as to biological evolution (Aldrich et al. 2008; Hodgson and Knudsen 2010). Hence, Veblen wrote several times of the Darwinian "natural selection" of habits and institutions (Camic and Hodgson 2011, 226, 238, 251, 260, 264, 296) and more often simply of their "selection" in a Darwinian sense. Darwinism provided an analytical framework for understanding cultural and institutional change.

Veblen also contributed to our understanding of human motivation through his concept of instinct. Veblen (1914, 1-2) himself noted that the word was becoming unpopular. But for a long time many of his fellow-institutionalists went much further, to reject the concept of instinct in its entirety (Hodgson 2004).

That goes too far. Human behavior must have biological as well as cultural foundations. Veblen (1914, 2-3, 13) saw instincts as "innate and persistent . . . propensities" and "hereditary traits." He went on to explain how they guided habit-formation, and how they could be diverted, or even negated, in a specific cultural and institutional context.

Veblen's perspective is remarkably relevant and modern. A large number of recent studies indicate that human phenomena such as language, altruism, cooperation and morality have partly a genetic foundation (Bowles and Gintis 2011; Field 2001, 2007; Hammerstein 2003; Hodgson 2012; Joyce 2006). While there is also a much cruder literature that attempts to explain human behavior entirely in biological terms, the more sophisticated and persuasive accounts reject biological reductionism. Culture and acquired habit do the lion's share of explanation, but instinctive dispositions are essential to appreciate the Darwinian chain of cause and

effect. The origins of cultural phenomena cannot themselves be explained entirely in cultural terms. This would be to assume that which has to be explained.

### ***The Evolution of Moral Motivation***

Instinctive dispositions help us to form habits. Among these are habits of thought concerning morality. Against the hedonism of the economics textbooks, human beings are constantly asking themselves: “what is the right thing to do?” The concept of habit in general, and moral habits in particular, constitute a major challenge to the neoclassical approach to human motivation. I have written elsewhere on the concept of habit (Hodgson 2004, 2006, 2010). I now address morality.

An adequate understanding of institutions must acknowledge moral as well as self-regarding motivations. Moral motivations were emphasized by members of the German historical school (Koslowski 1995, 1997) and acknowledged by original institutionalists such as Veblen and Commons. But these two institutionalists lacked a developed theory of morality that could dovetail into an analysis of how institutions work. Other institutionalists such as Clarence Ayres (1918) and J. Fagg Foster (1981), wrote much on ethics and values, but their concern was more to establish principles of policy evaluation and less to explain human motivation. Much worse, the concept of morality plays no significant role in the new institutional economics. Instead Oliver Williamson (1975) makes opportunism the star of the show.

We need first to consider the nature of a moral judgment, without necessarily establishing what is morally right or correct. We address descriptive rather than normative ethics. Philosophers such as John L. Mackie (1977, 33) and Richard Joyce (2006, 70) establish that moral judgments are inescapable, thus surpassing matters of convenience or preference. Morals are more than mere conventions. They are more about “doing the right thing” than satisfying one’s tastes.

Research has shown that humans cooperate and act altruistically at a much higher frequency than that predicted by neoclassical economists (Bowles and Gintis 2011; Field 2001, 2007; Hammerstein 2003). But this literature generally conflates altruism or cooperation with morality. When we cooperate by driving on the same side of the road as others, our prime motivation is survival rather than morality. Being altruistic to close relatives is not necessarily evidence of moral inclusiveness or universality. Morality is a different matter.

Veblen (1898b, 188) argued that assumptions about human nature should be consistent with our understanding of human evolution through Darwinian natural selection. In 1871, William Stanley Jevons (1871) and Carl Menger (1871) proclaimed self-interested economic man as the foundation of economic thinking. Darwin published an evolutionary refutation of this core assumption in the very same year. In Darwin’s (1871) account, morality results from a combination of emotional impulses and thoughtful deliberation. He argued that although primitive moral feelings have evolved for millions of years among “the progenitors of man” (1871, vol. 1, 88-89), humans alone have a fully developed sense of morality:

A moral being is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them. We have no reason to suppose that any of the lower animals have this capacity . . . man . . . alone can with certainty be ranked as a moral being.

Darwin considered dispositions such as “sympathy, fidelity, and courage” that would advantage one tribe against another in a struggle for existence. Darwin (1871, vol. 1, 162-166) wrote:

Selfish and contentious people will not cohere, and without coherence nothing can be effected . . . although a high standard of morality gives but a slight or no advantage to each individual man . . . over the other men of the same tribe . . . an advancement in the standard of morality . . . will certainly give an immense advantage to one tribe over another . . . a tribe including many members who . . . were always ready to give aid to each other and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection.

Hence groups with members that devote themselves to the interests of their group will have an advantage in the struggle for survival. Darwin’s evolutionary explanation of moral sentiments relies on group selection, where individual traits that benefit the group are assumed to prosper automatically. Darwin did not counter the objection that selfish individuals would be able to free-ride within an altruistic group, and eventually out-breed the unselfish (Dawkins 1976; Williams 1966). Before it was shown how free-riding could be contained, and the theory of group selection was rehabilitated (Sober and Wilson 1998; Wilson and Sober 1994), Darwin’s theory of the evolution of morality was regarded as quaint and outmoded. But now it has been sustained by evidence.<sup>2</sup>

As Darwin insisted, morality itself relies on sophisticated deliberation, and this could not have emerged among humans prior to language, which probably became adequate for the task very roughly 100,000 years ago (Oppenheimer 2004). All except Biblical fundamentalists will agree that this is very recent in human evolution.

The centrality of linguistic deliberation means that the evolution of morality is much about culture as well as genes. Genes provide the basic impulses while culture builds upon them (Hauser 2006). The basic impulses may be a result of longstanding genetic selection among closely-related kin (Hamilton 1964). When a language-based culture gets established, cultural group selection does the evolutionary work (Boyd and Richerson 1985; Henrich 2004; Hodgson 2012).

### ***Moral Motivation and European Economics***

Discussion of moral motivation in economics is rare. Yet in the opening sentence of his *Theory of Moral Sentiments* of 1759, Adam Smith ([1759] 1976, 9) wrote of

“principles in [man’s] nature, which interest him in the fortune of others, and render their happiness necessary to him.” Smith ([1759] 1976, 158-9) further wrote:

Nature . . . has not . . . abandoned us entirely to the delusions of self-love. Our continual observations upon the conduct of others, insensibly lead us to form to ourselves certain general rules concerning what is fit and proper to be done or to be avoided. . . . It is thus that the general rules of morality are formed.

In England John Ruskin (1866, 17) attacked the idea that the social affections “are accidental and disturbing elements in human nature; but avarice and the desire of progress are constant elements.”

Influenced by both John Ruskin and the German historical school, the neglected English economist John A. Hobson placed moral issues at the center of his understanding of both human motivation and economic policy. (Incidentally, Hobson’s birthplace in 1858 in Derby in the English Midlands is only 36 miles from my home, and his surname is similar to mine. One wonders perhaps if my award is a clerical error.) With Albert F. Mummery, Hobson invented the term “unemployment” and provided a proto-Keynesian analysis of its causes (Hobson 1896; Mummery and Hobson 1889). Hobson (1902) inspired Lenin on imperialism. Hobson (1936) met Veblen and published a book on him, but his contribution to our understanding of morality in economics is less known.

Hobson (1921, 132) wrote of the “importance of retaining in moral and political philosophy the clear recognition that we are dealing with conduct which continues ever to be directed by biological considerations of survival” because “only thus can we grasp the substance and vitality of ideals.” If instead we regard ideals “as pure products of rational consciousness, of a moral and intellectual nature supervening upon our animal inheritance, it is easy . . . to dismiss them as illusions or shadowy epiphenomena.”

Hobson (1929, 13) argued that it would be better to “search for values not in the high abstractions of philosophic thought but in the lower levels of human nature – the instincts, appetites, and behavior of the animal man.” This stress on the importance of the evolved biological foundations of human morality put Hobson on the side of Darwin on this subject.<sup>3</sup> In contrast, other Darwinians such as Thomas Henry Huxley saw evolution as separate from morality.<sup>4</sup> And, Richard Dawkins (1976) regards evolution as producing entirely selfish individuals.<sup>5</sup>

### ***An Illustration: Economics and Environmental Policy***

Mainstream economists regard individual self-interest as the only solid foundation for policy. Moral values are regarded as superficial or transient. Thus, Dieter Helm – a leading environmental economist and former UK government advisor – claims that values are generally “fragile” and “highly uncertain.” Overlooking the possibility that

moral values have deep biological and cultural foundations, Helm (1991, ix) takes the view that moral values are ephemeral and have little to do with the “economic process.”

This theme is taken up by mainstream economist Partha Dasgupta. Addressing environmental problems, Dasgupta (1991, 31) writes: “I cannot think that it will do to look solemn and utter pious sentiments concerning our moral duty.” Discussions of moral values are thus removed from debates on environmental policy, in an appeal to self-interest alone. In the words of Hobson, moral values are treated as “illusions or shadowy epiphenomena.”

Moral values and norms are either disregarded in the neoclassical approach, or they are subsumed under the utilitarian calculus of satisfaction-seeking individuals. Either way, their distinct motivational significance is overlooked. Money value is used as the principal incentive. It is assumed that everything – including moral and aesthetic values – can be given a price.

Neoclassical economists such as Dasgupta and Helm focus on pecuniary and other material incentives to get people to change their behavior. But pecuniary and moral incentives can be vital complements, and are not necessarily rivals.<sup>6</sup> In some cases self-interest can be overridden by moral considerations. Moral discourse can help to educate people and alter their preferences. With an exclusive focus on pecuniary rewards, intrinsic motivations and moral concerns can be “crowded out” and undermined.<sup>7</sup>

Surveys that ask people to value the outcome of a proposed environmental policy often find respondents with moral commitments rather than unalloyed self-interest. Mark Sagoff (1988, 62) reports survey evidence showing that

respondents believe that environmental policy – for example the degree of pollution permitted in national parks – involves ethical, cultural, and aesthetic questions over which society must deliberate on the merits, and that this has nothing to do with pricing the satisfaction of preferences at the margin.

Clive Spash (2000) points out that large numbers of respondents in willingness-to-pay surveys refrain from giving an environmental resource a monetary value on the grounds of ethical beliefs in their intrinsic, non-tradable value. We may conclude that appeals to values such as fairness and cooperation, concern for other species, and the legacy for future human generations, are superior to a reliance on self-interest alone.<sup>8</sup>

### ***Conclusion***

If economics can be made into an evolutionary science, then there is no better opportunity than now. Turning economics into an evolutionary science requires a great interdisciplinary effort, drawing not only on economics past and present, but also on history, psychology, biology, anthropology, philosophy and other disciplines.

Evolutionary and institutional economists can appreciate the evolution of morality and insist on its place alongside self-interest in human motivation. Much of the recent literature undermines hedonistic notions previously lambasted by Veblen and other original institutionalists. Consideration of the evolution of morality undermines the whole utility-maximizing framework. It revolutionizes our understanding of individual motivation. Individualists rightly remind us that incentives are important. But an evolutionary theory of human motivation points to our inherited and enlargeable capacities to consider others and limit our greed. Policymakers should not appeal to greed alone.

There is no shortage of ethically-loaded issues. I have addressed environmental policy. A large part of the economy is devoted to caring services, where moral motivation is vital (Folbre 1995; Folbre and Nelson 2000; Jochimsen 2003). Developed economies spend much on health services; to rely here on informed self-interest is both unrealistic and corrosive (Hodgson 2008). There are many examples of moral irresponsibility in business, government, and the economics profession.<sup>9</sup> Yet evidence suggests that moral motivation is vital for cooperation in the workplace (Lopes, Santos and Teles 2009; Minkler 2008). If economics is not yet an evolutionary and moral science, then as a matter of urgency it needs to be.

### Notes

1. "Most highly developed" is defined here as a Human Development Index of 0.85 or above (United Nations Development Programme 2009).
2. It seems that some basic and universal moral dispositions, particularly concerning care for others, fairness, reciprocity, loyalty to the group, respect for tradition, and respect for authority, evolved genetically among closely-related kin (Haidt and Joseph 2004, 2007). Such dispositions are found to some degree in other primates (De Waal 1996).
3. Hobson's insistence on the moral nature of economic discourse towers over his predecessors in the profession. And his appreciation of the evolutionary foundations of morality surpasses John Maynard Keynes (1933), Kenneth Boulding (1969) and Amartya Sen (1987), notwithstanding the importance of their later ethical contributions.
4. In 1893, Huxley argued that "the ethical progress of society" depends on neither ignoring, accepting nor imitating natural selection in that sphere "but in combating it" (Huxley and Huxley 1947, 82). An admirer of Huxley was Ayres (1932). In contrast to Hobson, Ayres (1932, 96-97) opposed Darwin's (1871) account and its notion of social instincts, and supposed that "'moral feelings' are 'acquired' *in toto*" through culture. Dismissing Darwin's *Descent of Man* (1871) as "an outmoded classic," Ayres lauded Huxley's works as "exciting reading today." Ayres (1932, 95) also saw Darwin's notions of natural selection and sexual selection as obsolete: "Darwin is very nearly, if not quite, as outmoded today as Lamarck."
5. Dawkins (1976, 3, 215) declared: "Let us try to teach generosity and altruism, because we are born selfish. . . . We, alone on earth, can rebel against the tyranny of the selfish replicators." Echoing Huxley, evolution is said to make us selfish, but somehow inexplicably we can choose to be otherwise. The contrast with Darwin's (1871) views on human nature and morality are graphic.
6. As Elinor Ostrom (1990) and Michael Taylor (1996) have pointed out, many cases of cooperation in modern societies depend on combinations of normative exhortations, peer pressure, incentives and sanctions.
7. See Bowles (2008), Frey (1997), Frey and Jegen (2001), Ostrom (2000) and Volland (2008).
8. Schkade and Payne (1994) showed that in environmental surveys moral considerations dominate matters of self-interest. Another overview concluded that responses concerning contingent valuation

- of the environment “are dominated by citizen judgments concerning desirable social goals rather than by consumer preferences” (Blamey, Common and Quiggin 1995, 285).
9. Consider the evidence of moral irresponsibility and corruption prior to the Great Crash of 2009, as depicted in the 2010 movie-documentary *Inside Job*.

## References

- Aldrich, Howard E., Geoffrey M. Hodgson, David L. Hull, Thorbjørn Knudsen, Joel Mokyr and Viktor J. Vanberg. “In Defence of Generalized Darwinism.” *Journal of Evolutionary Economics* 18, 5 (2008): 577-596.
- Ayres, Clarence E. *The Nature of the Relationship Between Ethics and Economics*. Chicago: University of Chicago Press, 1918.
- . *Huxley*. New York: Norton, 1932.
- Blamey, Russell K., Michael S. Common and John Quiggin. “Respondents to Contingent Valuation Surveys: Consumers or Citizens?” *Australian Journal of Agricultural Economics* 39, 3 (1995): 263-288.
- Boulding, Kenneth E. “Economics as a Moral Science?” *American Economic Review* 59, 1 (1969): 1-12.
- Bowles, Samuel. “Policies Designed for Self-Interested Citizens May Undermine ‘The Moral Sentiments’: Evidence from Economic Experiments.” *Science* 320, 20 (2008): 1605-1609.
- Bowles, Samuel and Herbert Gintis. *A Cooperative Species: Human Reciprocity and Its Evolution*. Princeton: Princeton University Press, 2011.
- Boyd, Robert and Peter J. Richerson. *Culture and the Evolutionary Process*. Chicago: University of Chicago Press, 1985.
- Camic, Charles and Geoffrey M. Hodgson (eds.). *Essential Writings of Thorstein Veblen*. London: Routledge, 2011.
- Dasgupta, Partha. “The Environment as a Commodity.” In *Economic Policy Towards the Environment*, edited by Dieter Helm, pp. 25-51. Oxford: Basil Blackwell, 1991.
- Darwin, Charles R. *The Descent of Man, and Selection in Relation to Sex*, 1st ed., 2 vols. London: Murray and New York: Hill, 1871.
- . *Metaphysics, Materialism, and the Evolution of Mind: Early Writings of Charles Darwin*. Transcribed and annotated by Paul H. Barrett with a commentary by Howard E. Gruber. Chicago: University of Chicago Press, 1974.
- Dawkins, Richard. *The Selfish Gene*. Oxford: Oxford University Press, 1976.
- De Waal, Frans B. M. *Good Natured: The Origin of Right and Wrong in Humans and Other Animals*. Cambridge, MA: Harvard University Press, 1996.
- Field, Alexander J. *Altruistically Inclined? The Behavioral Sciences, Evolutionary Theory, and the Origins of Reciprocity*. Ann Arbor: University of Michigan Press, 2001.
- . “Beyond Foraging: Evolutionary Theory, Institutional Variation, and Economic Performance.” *Journal of Institutional Economics* 3, 3 (2007): 265-291.
- Folbre, Nancy. “‘Holding Hands at Midnight’: The Paradox of Caring Labor.” *Feminist Economics* 1, 1 (1995): 73-92.
- Folbre, Nancy and Julie A. Nelson. “For Love or Money – Or Both?” *Journal of Economic Perspectives* 14, 4 (2000): 123-140.
- Foster, John Fagg. “The Relation Between the Theory of Value and Economic Analysis.” *Journal of Economic Issues* 15, 4 (1981): 899-905.
- Frey, Bruno S. *Not Just for Money: An Economic Theory of Personal Motivation*. Aldershot: Edward Elgar, 1997.
- Frey, Bruno S. and Reto Jegen. “Motivation Crowding Theory.” *Journal of Economic Surveys* 15, 5 (2001): 589-623.
- Haidt, Jonathan and Craig Joseph. “Intuitive Ethics: How Innately Prepared Intuitions Generate Culturally Variable Virtues.” *Daedalus* 133, 4 (2004): 55-66.
- . “The Moral Mind: How Five Sets of Innate Intuitions Guide the Development of Many Culture-Specific Virtues, and Perhaps Even Modules.” In *The Innate Mind, vol. 3, Foundations and the Future*, edited by Peter Carruthers, Stephen Laurence and Stephen Stich, pp. 367-444. Oxford and New York: Oxford University Press, 2007.

- Hamilton, William D. "The Genetical Evolution of Social Behavior." *Journal of Theoretical Biology* 7, 1 (1964): 1-32.
- Hammerstein, Peter (ed.). *Genetic and Cultural Evolution of Cooperation*. Cambridge: MIT Press, 2003.
- Hauser, Marc D. *Moral Minds: How Nature Designed Our Universal Sense of Right and Wrong*. New York: Harper Collins, 2006.
- Hecht, Jeff. "Why Doesn't America Believe in Evolution?" *New Scientist*, August 20, 2006. Available at [www.newscientist.com/article/dn9786-why-doesnt-america-believe-in-evolution.html](http://www.newscientist.com/article/dn9786-why-doesnt-america-believe-in-evolution.html). Accessed November 23, 2011.
- Helm, Dieter (ed.). *Economic Policy Towards the Environment*. Oxford: Basil Blackwell, 1991.
- Henrich, Joseph. "Cultural Group Selection, Coevolutionary Processes and Large-Scale Cooperation." *Journal of Economic Behavior and Organization* 53, 1 (2004): 3-35.
- Hobson, John A. *The Problem of the Unemployed*. London: Methuen, 1896.
- . *Imperialism: A Study*. London: James Nisbet, 1902.
- . *Problems of a New World*. London: George Allen, 1921.
- . *Wealth and Life: A Study in Values*. London: Macmillan, 1929.
- . *Veblen*. London: Chapman and Hall, 1936.
- Hodgson, Geoffrey M. *The Evolution of Institutional Economics: Agency, Structure and Darwinism in American Institutionalism*. London: Routledge, 2004.
- . *Economics in the Shadows of Darwin and Marx: Essays on Institutional and Evolutionary Themes*. Cheltenham: Edward Elgar, 2006.
- . "An Institutional and Evolutionary Perspective on Health Economics." *Cambridge Journal of Economics* 32, 2 (2008): 235-256.
- . "Choice, Habit and Evolution." *Journal of Evolutionary Economics* 20, 1 (2010): 1-18.
- . *From Pleasure Machines to Moral Communities: An Evolutionary Economics without Homo Economicus*. Chicago: University of Chicago Press, 2012.
- Hodgson, Geoffrey M. and Thorbjørn Knudsen. *Darwin's Conjecture: The Search for General Principles of Social and Economic Evolution*. Chicago: University of Chicago Press, 2010.
- Huxley, Thomas Henry and Julian Huxley. *Evolution and Ethics, 1893-1943*. London: Pilot Press, 1947.
- Jevons, William Stanley. *The Theory of Political Economy*. London: Macmillan, 1871.
- Jochimsen, Maren A. *Careful Economics: Integrating Caring Activities and Economic Science*. Boston: Kluwer, 2003.
- Joyce, Richard. *The Evolution of Morality*. Cambridge: MIT Press, 2006.
- Keynes, John Maynard. *Essays in Biography*. London: Macmillan, 1933.
- Koslowski, Peter (ed.). *The Theory of Ethical Economy in the Historical School: Wilhelm Roscher, Lorenz von Stein, Gustav Schmoller, Wilhelm Dilthey and Contemporary Theory*. Berlin: Springer, 1995.
- . *Methodology of the Social Sciences, Ethics, and Economics in the Newer Historical School: From Max Weber and Rickert to Sombart and Rothacker*. Berlin: Springer, 1997.
- Lopes, Helena, Ana C. Santos and Nuno Teles. "The Motives for Cooperation in Work Organisations." *Journal of Institutional Economics* 5, 3 (2009): 259-288.
- Mackie, John Leslie. *Ethics: Inventing Right and Wrong*. Harmondsworth: Penguin, 1977.
- Menger, Carl. *Grundsätze der Volkswirtschaftslehre*, 1st ed. Tübingen: J.C.B. Mohr, 1871. Published in English as *Principles of Economics*. New York: New York University Press, 1981.
- Minkler, Lance P. *Integrity and Agreement: Economics When Principles Also Matter*. Ann Arbor: University of Michigan Press, 2008.
- Mummery, Albert F. and John A. Hobson. *The Physiology of Industry*. London: John Murray, 1889.
- Oppenheimer, Stephen. *The Real Eve*. New York: Carroll and Graf, 2004. Published in the UK as *Out of Eden*. London: Constable and Robinson.
- Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press, 1990.
- . "Crowding out Citizenship." *Scandinavian Political Studies* 23, 1 (2000): 3-16.
- Peirce, Charles Sanders. "How to Make Our Ideas Clear." *Popular Science Monthly* 12 (1878): 286-302.
- Ruskin, John. *Unto This Last: Four Essays on the First Principles of Political Economy*. London: John Wiley, 1866.

- Rutherford, Malcolm H. *The Institutional Movement in American Economics, 1918–1947: Science and Social Control*. Cambridge: Cambridge University Press, 2011.
- Sagoff, Mark. "Some Problems with Environmental Economics." *Environmental Ethics* 3, 1 (1988): 55-74.
- Schkade, David A. and John W. Payne. "How People Respond to Contingent Valuation Questions: A Verbal Protocol Analysis of Willingness to Pay for an Environmental Regulation." *Journal of Environmental Economics and Management* 26, 1 (1994): 88-109.
- Sen, Amartya K. *On Ethics and Economics*. Oxford and New York: Basil Blackwell, 1987.
- Sober, Elliott and David Sloan Wilson. *Unto Others: The Evolution and Psychology of Unselfish Behavior*. Cambridge, MA: Harvard University Press, 1998.
- Smith, Adam. *The Theory of Moral Sentiments; or, An Essay Towards an Analysis of the Principles by which Men Naturally Judge Concerning the Conduct and Character, First of Their Neighbours, and Afterwards of Themselves*, edited by D.D. Raphael and A.L. Macfie. Oxford: Clarendon, [1759] 1976.
- Spash, Clive L. "Multiple Value Expression in Contingent Valuation: Economics and Ethics." *Environmental Science Technology* 34, 8 (2000): 1433-1438.
- Taylor, Michael J. "Good Government: On Hierarchy, Social Capital and the Limitations of Rational Choice Theory." *Journal of Political Philosophy* 4, 1 (1996): 1-28.
- United Nations Development Programme. "Human Development Report 2009." 2009. Available at <http://hdrstats.undp.org/en/indicators/161.html>. Accessed July 22, 2011.
- Veblen, Thorstein B. "Why Is Economics Not an Evolutionary Science?" *Quarterly Journal of Economics* 12, 3 (1898a): 373-397.
- . "The Instinct of Workmanship and the Irksomeness of Labor." *American Journal of Sociology* 4, 2 (1898b): 187-201.
- . "The Socialist Economics of Karl Marx and His Followers II: The Later Marxism." *Quarterly Journal of Economics* 21, 1 (1907): 299-322.
- . "The Evolution of the Scientific Point of View." *University of California Chronicle* 10, 4 (1908): 396-416.
- . *The Instinct of Workmanship, and the State of the Industrial Arts*. New York: Macmillan, 1914.
- Vollan, Bjørn. "Socio-Ecological Explanations for Crowding-Out Effects from Economic Field Experiments in Southern Africa." *Ecological Economics* 67, 4 (2008): 560-573.
- Wikipedia. "Level of Support for Evolution." 2011 Available at [http://en.wikipedia.org/wiki/Level\\_of\\_support\\_for\\_evolution](http://en.wikipedia.org/wiki/Level_of_support_for_evolution). Accessed February 21, 2011.
- Williams, George C. *Adaptation and Natural Selection*. Princeton: Princeton University Press, 1966.
- Williamson, Oliver E. *Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organization*. New York: Free Press, 1975.
- Wilson, David Sloan and Elliott Sober. "Reintroducing Group Selection to the Human Behavioral Sciences." *Behavioral and Brain Sciences* 17, 4 (1994): 585-608.