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RECEIVED 22 May 2025

ACCEPTED 25 July 2025

PUBLISHED 03 September 2025

CITATION

Putterman L (2025) Herb Gintis on economics and welfare, political economy, and evolution and human behavior.
Front. Behav. Econ. 4:1633414.
doi: 10.3389/frbhe.2025.1633414

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Herb Gintis on economics and welfare, political economy, and evolution and human behavior

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Herbert Gintis's research cut to the heart of what scientists must probe in order to understand what kinds of economic arrangements are possible, and which of those arrangements have the potential to make possible human flourishing among the largest numbers of people. Early in his career, he recognized that economics' standard depiction of human actors constituted a barrier to serious research on these questions. Gintis can be called a behavioral economist, but he was also an adept practitioner of neoclassical-style modeling, a game theorist, an insatiable reader of psychology, anthropology and sociology, a contributor to gene-culture co-evolutionary analysis, and a sociobiologist in the broad sense of appreciating that the evolved *Homo sapiens* rewards inspection with the eye of an ethologist.

JEL codes: I31, C70, D63, B59, A12.

KEYWORDS

wellbeing, economic system, evolution, welfare, behavioral economics

Introduction

I count myself among the many scholars who were influenced by and found inspiration in the work of Herbert Gintis. But as I scrolled through lists of his dozens of published articles and books to prepare to write what follows, I was humbled to realize that those of his works with which I am most familiar are in some ways just a random assortment, determined mainly by which moments in my own intellectual journey happened to bring me into contact with what he was then working on.

Of course, Gintis was one of the broadest and deepest thinkers of the late 20th and early 21st centuries about the impact of economic arrangements on human capacities and outlooks, and the converse impact of those capacities and outlooks on economic arrangements and outcomes. Given the breadth of his work, it should not be surprising that there are different understandings of it, varying with the orientation of the reader and those parts of the work to which they have exposed themselves. I'm pleased to have the opportunity to discuss a few of his works, as I have come to know them.

I count Herb Gintis as one of the economists whose outlook on the nature of our subject, and on "what is to be done," has had the greatest impact on my work. By proving that important scholarship in economics and in social science more broadly could be undertaken from the vantage points that I'll touch on here, he was one of a handful of thinkers who provided me with the inspiration and assurance to believe that one can be an economist without sacrificing one's demands for holism, realism, and a clear-eyed focus on big picture issues. His work provided confirmation to me that it is, after all, possible to populate our intellectual universes—even as economists—with the complex flesh-and-blood human beings who exist in the world outside of our studies, but who too often seem absent from our discipline's textbooks and scholarly journals.

First encounters: welfare economics and individual development

As an undergraduate and graduate student of economics in the mid- and late-1970s, I came to the subject, as did at least a few in my generation, convinced that the economic system in which I had grown up was almost certainly not the best possible institutional structure in which to maximize human wellbeing. These student years were for me a dive back into academic life after a 4 year hiatus most of which had been spent engaging in manual labor in small egalitarian communities. So I did whatever casting about I could make time for among the library stacks, eager to know if there was anyone in the discipline exploring the questions I thought important without a preconceived notion that the superiority of the market system was a proven fact. While attracted to egalitarian ideals and quickly reading my way through the core of Marx's economics, I was also looking for thinkers with a healthy skepticism of the idea that the path to all truth had been laid out in *Capital*. I heard that there were pockets of resistance to both neoclassical and Marxist orthodoxy, here and there, but that none of the dissenters were taken seriously by the scholars who dominated large American economics departments. I was warned, too, that even toying with non-mainstream approaches could put the prospect of an academic career in economics into serious jeopardy. So I sampled some heterodox material here and there but focused on acquiring enough of the toolkit of the dominant school to adapt its models to studying issues that concerned me. I studied some unorthodox subject matter, like the potential advantages of redistributing land to the land-poor and landless in poor countries and the apparently good performance of some companies owned by their workers, but I understood the rules of the game in economics to require working within the assumption that humans are strictly self-interested and entirely rational, and that their objectives boil down to acquiring earnings to support consumption and accumulate wealth, and incurring the least disutility from effort while doing so.

Early in my teaching career, I was fortunate to have the opportunity to design a seminar-style course on a topic of my choice. I developed a syllabus on the history and philosophical context of economic thought, with special attention to the discipline's methodological orientation and to its intersections with social and political thought. Possibly I had stumbled on the piece earlier, but it was only then, I think, that I read carefully and with appreciation the first paper I had encountered by Gintis: "A Radical Analysis of Welfare Economics and Individual Development," which had appeared in the *Quarterly Journal of Economics* in 1972. Only a tiny handful of economists critical of the neoclassical approach had successfully placed an article in the *QJE* or other journals at the pinnacle of academic economics, and this complex, deeply researched, and powerfully articulated paper by Gintis was extraordinary for its intelligence, originality, and effectiveness in laying out a serious challenge to the mainstream paradigm.

Since my first exposure to the proofs that a hypothetical perfectly competitive economy maximizes social welfare, as an undergraduate, I had admired the elegance of the geometric representation of arguments explaining why such an economy would settle at a tangency between a community indifference curve and a societal production possibility frontier. I believed those arguments were grossly misleading, but being able to continue

to study them, to better understand their weaknesses, and to help others do the same through teaching, stood out for me as one of the great attractions of a life as a scholar and teacher of economics. In Gintis's article, I found the most clear and rigorous exposition of what was fundamentally wrong with neoclassical welfare economics, a critique centered on the indefensibility of the assumption that each individual has exogenously given preferences over potentially available sets of goods, services, and activities, and that firms emerge to respond to the resulting profit opportunities by providing the goods and services that satisfy the demands of those individuals as fully as possible and at the lowest cost possible subject to resource and technological constraints—constraints that are themselves in the process of being gradually loosened by discoveries and innovations likewise motivated by opportunities to earn profits. I had encountered criticisms centering on the idea that the aggregation of individual preferences into market demand functions reflects differences in purchasing power that stem from differences in the marginal value products of the resources over which different individuals have ownership claims, criticisms of the ethical justifications of unequal resource control that were offered by advocates for *laissez faire*, criticisms based on the pervasiveness of market failures that render idealized marginal product theories of income distribution misleading, and political economic criticisms of arguments that corrections of market failures and of socially unacceptable inequality can be expected from a government responding to a democratic political process. But Gintis's article focused primarily on the unsustainability of the idea that preferences over goods, services and activities are themselves exogenous to economic and social arrangements. He argued cogently that individuals' skill sets, attitudes, beliefs, socioeconomic aspirations and consumption preferences, were substantially shaped by the social and economic milieu in which they developed between infancy and adulthood, including societal and peer role models, and influences of family upbringing, of broadcast and print media, and of formal schooling. He provided a strong case for presuming, and a framework for future research on the idea, that people in late twentieth century America were as much shaped by the kind of economy in which their parents and teachers assumed that they would need to function, as were the institutions of the economic system themselves shaped by the kinds of people who would be its workers and consumers. I must admit that I never read much of Bowles and Gintis's *Schooling in Capitalist America* (Bowles and Gintis, 1976), from which I was partly put off by its acclaim among committed Marxists, and the gist of which I assumed I could absorb second-hand. As applied work by the author of "A Radical Analysis of Welfare Economics ...," I suspect that it is worth more of a thumbing through than I gave it, but I also suspect that I would remain a bigger fan of "Radical Analysis," which I now see as a clear harbinger of later work by Gintis, to be discussed below.

Contested exchange and the revenge of *Homo economicus*

The next works by Gintis that stand out for and exerted influence on me were joint works with Bowles on the microeconomic foundations of employment, credit, and other

key markets. I refer here to their article “Contested Exchange: New Microfoundations for the Political Economy of Capitalism” (Bowles and Gintis, 1990), to their paper “The Revenge of Homo-Economicus: Contested Exchange and the Revival of Political Economy” (Bowles and Gintis, 1993), which appeared alongside response articles by Joseph Stiglitz and by Oliver Williamson in the same issue of the *Journal of Economic Perspectives*, and to their contributions to the volume they co-edited with Bo Gustafsson, *Markets and Democracy: Participation, Accountability and Efficiency* (Bowles et al., 1993). These contributions seem to mark a relatively mature stage of Gintis’s and Bowles’s efforts to construct an alternative body of microeconomic analysis that could support a critique of capitalist institutions drawing on the mathematical tool-kit of modern economics, and that could thus compete with neoclassical economics on its own terms where Marx’s pre-marginalist Ricardian approach falls short.¹ Although not as pertinent to understanding Gintis as a behavioral economist as are some of the items that I discuss later, these papers illustrate the contribution of Gintis as a microeconomic theorist, the way his behaviorist inclinations could be married to the neoclassical style of theorizing, and where he entered into a truce with neoclassicism in order to debate substantive issues on a partially common methodological ground.

Bowles and Gintis’s political economy of the capitalist firm and labor market looks more neoclassical than Marxist since it features profit-maximizing firms competing with one another, on one side of the market, and utility-maximizing workers who draw utility from earnings and suffer disutility from effort, on the other side. It is non-neoclassical, however, in asserting that the exercise of power over workers by capitalist firm owners has to be acknowledged in order to make sense of the nature of the worker-employer relationship. The analytical element that opens the door to a role of power in what would otherwise appear to be a market interaction between firm and worker is the idea that the amount of effort that the worker provides to the firm cannot be specified in an enforceable contract because any given worker’s effort on the job is opaque to agents not present at the workplace. If the firm were to reduce the worker’s pay on grounds that the worker had provided less effort than others, the worker could sue the firm, which would be unable to provide verifiable support for its assessment of that effort, and the firm would find it more difficult to hire other workers, since it would acquire (justifiably or not) a reputation for underpaying workers to add to its profits. The firm addresses this predicament by offering workers a contract requiring them to show up and follow directions in exchange for an above-market-clearing wage, and using the leverage it gains over workers by making continued employment contingent on high effort so that it is in the workers’ interests to provide the stipulated effort level.

Although analytical features track closely those of the related model of Shapiro and Stiglitz (1984), Bowles and Gintis added to the latter’s depiction the idea that the firm enjoys an asymmetric

power advantage over workers because of its power to withhold valued employment opportunities that are in short supply thanks to the above-market-clearing wage device. This power is used by the firm not only to enforce its demand for levels of effort that remain in the workers’ interests to provide given the expected payoff should they lose their jobs due to being detected giving lower effort. It is also exercised, at least in some instances, to satisfy psychological cravings to “boss around” subordinates by issuing arbitrary orders for the satisfaction of seeing workers bend to meet them. Though the model is more marginalist or neoclassical than Marxist in its building blocks, the authors thus succeed in breathing new life into Marx’s assertion that agreement on contract terms between juridical equals, in the market for jobs, conceals a sphere of power relations within workplaces (“the hidden abode of production”), where “labor” is “extracted” from “labor power” (Marx, 1867). Bowles and Gintis also added more emphasis than Shapiro and Stiglitz on the role of hired supervisors, and they used the firms’ choices of cost minimizing combinations of hired supervisors (to increase the chance of detecting low effort) and additional wage as the centerpiece of their argument (in all three publications of 1990 and 1993) that the capitalist employment relationship is economically inefficient. The argument is that effort could have been elicited at lower cost by sharing profit with workers than is done by hiring additional supervisors, but profit-sharing tends, in the limit, to make workers partners in the firm, and the alien nature of such an arrangement to the capitalist character of firms tends to rule out heavy emphasis on profit-sharing in the capitalist market economy as we know it. A parallel treatment of the credit market, in which lenders lend at below-market-clearing interest rates and obtain power over borrowers by making renewal of loans contingent on their satisfaction of lenders’ preferences, plays a reinforcing role, as lenders are argued to prefer dealing with top-down firms whose managers they can more easily exert control over rather than with workers’ cooperatives, the democratic nature of which is argued by the authors to makes the exertion of outside control more difficult.

What features of the approach are behavioral? They include the sense of conflict between workers and firms, the antagonistic relationship between supervisors and workers, and the penchant for arbitrary exercise of authority. Even more importantly, the argument that the capitalist firm is inherently inefficient requires it to be the case that there is a feasible alternative, albeit one that is not able to compete with the inefficient capitalist enterprise type due to the structure of power in the capitalist economic system as a whole. In particular, Bowles and Gintis rest their argument that a more efficient way to organize production is available on the claim that firms managed and owned by workers would be more efficient than capitalist ones, as evidenced by the stylized fact that such firms succeed in eliciting high effort from their workers but hire considerably fewer supervisors (Pencavel, 2002; Dow, 2003). To explain the high effort tendency of worker owned firms despite the contrary prediction for rational self-interested agents—the prediction that workers would try to free ride on fellow workers’ efforts given that the marginal benefit of their effort is shared by others but its marginal disutility falls entirely on themselves (Alchian and Demsetz, 1972; Putterman, 1984)—Bowles and Gintis relied on the behavioral and evolutionary idea that, contrary to neoclassical economics, human beings are predisposed to cooperate

¹ Focus on a reformulation of microeconomics seems to have remained more central to the work of Bowles, who earlier published Bowles (1985), and who, after the papers reviewed here, published a graduate microeconomics text (Bowles, 2004) and played a leadership role in the CORE Econ (Curriculum Open-Access Resources in Economics) Project.

when their interests are aligned, in part through using moral suasion and the threat of social ostracism against those not pulling their weight.² The idea that an ability to cooperate under favorable circumstances is an evolved feature of human nature proceeded to be a central theme of the subsequent research of Bowles and Gintis both when working independently, together, and with other collaborators. Systemic features of the capitalist economy that account for worker owned firms being relatively rare, despite their inherent superiority, according to Bowles and Gintis, include a bias of financial institutions against lending to them, in part due to the difficulty of exercising power over democratically governed enterprises mentioned above, and also the societal inculcation of beliefs that discourage efforts to build institutional environments more conducive to worker control. The socialization, education and beliefs components of the systemic forces discouraging emergence of a more labor-centric economic system bring the argument back, full circle, to the endogeneity of preferences theme in Gintis's "Radical Analysis of Welfare Economics" paper and Bowles and Gintis's *Schooling in Capitalist America*.

Evolution, human nature and cooperation

The contributions discussed so far indicate that most of Gintis's work, especially during the 1970s to 1990s, was sharply critical of capitalism as a way of organizing economic life, and committed to the premise that alternative institutional arrangements could be designed that would support a more equitable distribution of the benefits of economic activity and would open paths of personal development more conducive to human growth. Gintis's work on the economics of inequality (for example, [Bardhan et al., 2000](#); [Bowles and Gintis, 2002](#)) is also of a piece with this theme. But Gintis's intellectual project became increasingly influential to more

ideologically diverse and less politically self-identified scholars as the overtly political aspect of its framing receded in prominence. Beginning in the second half of the 1990s, he played a leading role in launching and guiding the norms and preferences network funded by the MacArthur Foundation, in which, along with Bowles, he interacted intensively with the anthropologist founders of the gene-culture co-evolution approach to understanding human nature—Robert Boyd and Peter Richerson—and he engaged with a broader network of anthropologists including Boyd's then recent student Joseph Henrich, and with leading figures in behavioral game theory and experimental economics, especially Colin Camerer and Ernst Fehr. After shaping the framework for the network's projects, Gintis co-edited their two important collaborative volumes, one a set of conceptual papers laying out the ways in which human behavior could be studied as that of a moral and social animal guided by emotions as much as by rational calculations ([Gintis et al., 2005](#)), the other a set of papers reporting initial rounds of experimentation with economic-style games to study the social norms of a diverse set of small-scale societies representing a range of pre-industrial lifeways from hunter-gatherers to pastoralists and aquatic hunters to horticulturists ([Henrich et al., 2004](#)). He also wrote numerous theoretical papers both solo and with Bowles, Boyd and others, on how the human capacity to cooperate could have evolved, laid out an approach to that topic in an influential book with [Bowles and Gintis \(2011\)](#), wrote and revised a textbook on game theory ([Gintis, 2000, 2009a](#)), and made the case for the unification of the behavioral sciences in an article ([Gintis, 2007](#)) and book ([Gintis, 2009b](#); [Bowles and Gintis, 1976](#)).

My own interests were evolving in very similar ways in the same years, undoubtedly due in part to the influence of Herb, Sam and others in that late 1990s and early 2000s MacArthur network. But I could not keep up with all of his outpouring of work while still pursuing research and teaching of my own. So again, my points of contact are selective and partly serendipitous. I became an experimental economist in no small part due to the example of Fehr and his students, who were introduced to me by Gintis and Bowles. Some of the first funding that permitted my collaborators and me to explore questions of cooperation in the lab came from the McArthur Foundation, as a spin-off of its support of the norms and preferences network. It was Gintis and Bowles who suggested studying how the endogenous evolution of group composition would impact decisions to cooperate or free ride in a voluntary contribution setting, as my co-authors and I acknowledged in [Page et al., 2005](#). They therefore deserve a share of the credit for the many papers on endogenous group formation that have followed (discussions of the endogenous sorting literature include [Chaudhuri, 2011](#) and [Guido et al., 2019](#)).³ My attraction to explanations of human pro-sociality that focus on the selection pressures at work in human biological and cultural evolution⁴ developed along lines similar to those I heard discussed by MacArthur network participants in the few group gatherings I

² Of course, standard economics recognizes ongoing cooperation as a possible equilibrium for strictly rational and self-interested agents, under indefinite repetition with high enough repetition probability or low enough present time preference. But an equilibrium of strategies that support cooperation is only one of many equilibria, and there is no agreed basis for determining which equilibrium the agents will select. [Weitzman and Kruse \(1990\)](#) suggested that organizational culture could play the role of equilibrium selector in organizations such as profit-sharing enterprises. But Bowles and Gintis proposed that evolutionary forces working themselves out over a vast expanse of time had selected prosocial, cooperative dispositions that at least some would select even when not supportable as equilibria, e.g. even when engaged in one-shot interactions—the disposition they labeled "strong reciprocity." This is a key connecting link between their political economy of the capitalist enterprise and their work on the evolution of human cooperation, discussed below. Another connection exists if one considers, as an alternative to indefinitely repeated interaction, the idea raised by [Kreps et al. \(1982\)](#) that a selfishly rational individual may find it profitable to cooperate in a finitely repeated game if they believe the counterpart could be of an alternate type, such as a tit-for-tat player. Gintis and Bowles' later work on human evolution considers evolutionary factors that may have led to presence of such tit-for-tat or other "non-standard" (by neoclassical lights) types that the Kreps et al. rational actor might suspect to be represented in the population of interaction partners.

³ My own papers in this vein also include [Cinyabuguma et al. \(2005\)](#), and [Kamei and Putterman \(2017\)](#) and [Guido et al. \(2025\)](#), and on the related theme of exogenous sorting into groups, [Önes and Putterman \(2007\)](#).

⁴ See for example [Ben-Ner and Putterman \(1998, 2000\)](#) and [Putterman \(2010, 2012\)](#).

was privileged to attend, lines that began to be spelled out formally in Gintis et al. (2005) and were further developed in Bowles and Gintis (2011).

There is clearly a connection between the theoretical interest of Bowles and Gintis in human cooperation and the clash between the emphases of free market proponents on the self-interested and competitive side of human behavior and the contrasting emphasis of social radicals on the potential for cooperation and solidarity. The keen interest of economists like Gintis in seeking a scientific understanding of what underlies tendencies toward cooperation within groups of humans ranging from pre-state hunter-gatherer bands to globally networked research teams may thus have been motivated in part by his normative commitments in the realm of political economy and economic system design. However, the observation that humans are an unusually gregarious and in some contexts mutually supportive species has an ancient pedigree, dating back at least to Aristotle, with many contributors to that long chain of discussion having no definite social agenda in mind. Like other recent predecessors, Gintis's deep dive into human social psychological dispositions and their evolution engaged with an interdisciplinary community of psychologists, anthropologists, evolutionary theorists, ethologists, and other social scientists endeavoring to understand what most took to be as much a hallmark of the human species as are opposable thumbs, upright posture and the mastery of fire.

The entomologist turned evolutionary theorist E. O. Wilson was one of many who attributed the success of the human species in spreading throughout earth's habitable terrain and becoming the dominant shaper of terrestrial habitats, by the twentieth century, to humans' intense sociality and ability to cooperate (e.g., Wilson, 2012). As argued by the neuroscientist LeDoux (2019), the evolution of life on earth has been making use of cooperation as a means to successfully explore additional biological and behavioral niches⁵ since the first eukaryotes emerged some two billion years ago from the successful symbiosis of organelles thought to be descended from previously independent organisms. A second quantum leap in interdependence and cooperation began perhaps 1.4 billion years later with the emergence of multicellular organisms, wherein the large majority of cell lines (heart cells, lung cells, even brain cells) voluntarily consign themselves to being reproductive dead ends, while being members of a coalition that helps specialized reproductive cells put descendants into the gene pool on behalf of the group as a whole. In a still further step up the ladder of cooperation, the ants, termites, and bees studied by Wilson and others are species in which entire organisms relate to one another analogously to the cells of a multicellular organism, assuming specialized phenotypes

and behaviors and foregoing reproduction in support of a single type specialized to that function within each colony. But it is agreed that the basis for such eusociality in the cells of multicellular organisms and the individual members of insect colonies is a degree of shared genetic kinship which is absent in those mammals that have taken sociality further than other vertebrates.

Gintis and collaborators took on the question of what accounts for the high degree of cooperation and norm-compliance in human societies using a multi-pronged approach. They reviewed knowledge on cooperation and conflict in human societies, including studies aimed at understanding why humans will in some cases risk and even sacrifice their lives for others, especially non-kin, as in the case of volunteering for combat to defend the besieged nation-state with which they identify. They examined the expanding number of published laboratory experiments, initially ones mainly using student subjects in western universities, that study willingness to cooperate in social dilemma settings, willingness to pay to punish norm violators, apparent aversion to advantageous inequality or concern for fairness, positive reciprocation of generosity and punishment of unfair offers and free riding. They played a large part in the extension of the experimental method, using similar games, into previously non-traditional settings, especially the small-scale societies mentioned above. This work was undertaken with an eye to the possibility that culture aligns over time with a society's economic lifeway, and that the decisions displayed in such interactions by individuals in non-industrial societies might shed light on the normative equilibria to which societies in the pre-industrial past had gravitated, which would help to provide a more complete understanding of "human nature" in the large. On the assumption that the people of such diverse cultures are mostly indistinguishable from one another in biologically innate dispositions of behavior, they also deployed their observations of the cultures in question to test and refine the theory of gene-culture co-evolution, wherein the evolution of culture itself, also involving processes of mutation and selection but distinguished by availability of horizontal transmission and prestige- and success-biased selection, plays a larger role than genetic evolution in explaining changes in human behavior during the most recent tens of millennia. And they engaged in mathematical modeling, including both pure theory and simulations, as part of the process of modeling the evolutionary selection of human sociality and psychology.

In the realm of theory, the key challenge flows almost immediately from the definitions of altruism and cooperation on individuals' parts as partial sacrifice of own interests for others and engagement in group-beneficial actions in circumstances in which desisting from those actions would bring greater personal benefits. How could self-sacrificers be winners in the genetic lottery when, by definition, a less pro-social conspecific group member would be able to acquire more resources and thus stand a better chance of surviving to reproduce and to provision its offspring? Gintis and collaborators rejected the explanatory strategy of attributing cooperation with non-kin to a misfiring of kin altruism, itself attributable to inclusive fitness of the set of gene-bearers rather than fitness of the individual organism (Dawkins, 1976). They also insisted that it is insufficient to focus

⁵ I join others here, of course, in unscientifically personifying evolution as "making use of" and "exploring." I borrow the phrase "design space" from Dennett (2017). The inclination to imbue evolutionary processes with intentionality, so widespread in popular scientific writing like that of Dennett, Dawkins (1976), and others, seems almost certainly to be yet another illustration of the evolved character of human cognition. It strikes me as helpful to tolerate and to indulge in it, on occasion, provided we remember that the phrases involved are metaphorical in nature, since our minds are better equipped to understand concepts thus phrased.

on relationships of reciprocity in which accounts are well balanced to assure benefit to both sides. They wished to explain how substantial numbers in each human population can have come to exhibit willingness to make at least small sacrifices in own fitness, for example in the case of taking on the cost entailed to punish the violator of a socially beneficial norm. Most explanations favored by them included some form of group selection—the idea that moderately self-sacrificing tendencies could escape being culled by evolution if (i) the associated behaviors strengthened the survival prospects of group members as a whole, and (ii) group composition was assortative in the sense that being a cooperatively-disposed individual substantially increased one's likelihood of being surrounded by other such individuals, so that even if not all were strong cooperators and thus some fared better than the strong cooperating types, all members of the groups in which strong cooperators tended to be found experienced better outcomes in the competition for survival than did members of groups lacking those types.⁶

Bowles and Gintis were interested in experimental economics partly as a laboratory for testing hypotheses about general human dispositions governing choice in collective action dilemmas, and partly as a way to investigate the variability of dispositions across cultures that can be expected to be present if behavioral tendencies are molded not only by genetic factors like innate social emotions shared with other social mammals, but also culture. The gene-culture co-evolutionary approach which they embraced would predict such variability insofar as cultures differ from one another for environmental or economic niche reasons, as well as due to random variation and path dependence. They pointed to the evidence of widespread reciprocity found in the experimental gift exchange games of Fehr and collaborators, and especially the apparent presence of strong reciprocity (incapable

of itself being reciprocated) seen in versions of those games that permitted agents in the “employer” role to inflict costs on those who chose to be their “employees” but failed to reciprocate the high wages they received (Fehr and Gächter, 1998). They collaborated on public goods games with punishment opportunities which demonstrated similar tendencies (Carpenter et al., 2009). That punishment which is also costly to the punisher was given even at the end of the known last period of play showed evidence of strong negative reciprocity. They also pointed to findings that punishment recipients frequently reduced their free riding even though the monetary cost of being punished was insufficient to make free riding the less profitable choice (Hopfensitz and Reuben, 2009), interpreting this as evidence that one of the main drivers of punishment's efficacy is evidently the inducement of guilt feelings, workings of an emotional machinery with deep evolutionary roots in our own and other social mammalian lineages (Bowles and Gintis, 2005).

The results of the research network's experiments in the studied small-scale societies in Latin America, Africa, and Oceania indicated a wide range of propensities to engage in altruistic or fair sharing in dictator games and to accept low offers in ultimatum games. An interesting pattern emphasized in the group's much-cited paper in the *American Economic Review* (Henrich et al., 2004) is that both norms of equal sharing and inclination to punish unequal offers by rejecting them at a cost to own payoff tended to be weaker in societies in which individuals and their households tend to subsist economically with little exchange with others, especially market exchange. This result might seem surprising in view of the association of hunter-gatherers such as the Kung-San with a high degree of equality of status, consumption, and possessions. It also might seem to run counter to some readings of Marx as having seen capitalism as a force eroding community ties, values, and sentiment, including some sentiments protective of weaker community members. The embrace by Gintis and collaborators of the idea that market exchange promotes norms of fairness, trustworthiness and trust, may be seen as an example of Gintis's commitment, throughout his career, to investigating human behavior and social arrangements without being bound by the demands of any ideological camp.⁷

⁶ On assortative grouping, see Sethi and Somanathan (2003). The idea that traits beneficial to the groups individuals belong to but disadvantageous to the individual bearers relative to non-bearers might be positively selected for, called group selection, was strongly out of fashion when it was embraced by Bowles and Gintis, although the writing of philosopher of science Elliot Sober and the evolutionary biologist David Sloan Wilson (e.g. Sober and Wilson, 1998), who pioneered the late twentieth Century revival of group or multilevel selection reasoning, provided support for embracing the idea. Interestingly, E. O. Wilson, no relation of D. S. Wilson, moved away from his earlier exclusive reliance on kin selection as an explanation for altruism, co-authored a much-noted paper on multilevel selection with D. S. Wilson in 2007, and made use of it to explain the extraordinary success of the human species in his 2012 book *The Social Conquest of Earth*. An anonymous reviewer pointed out that in the kind of evolutionary equilibrium Bowles and Gintis employed, with an equilibrium equation containing a group gain term counterposed to one of individual cost, the latter cost plays a theoretical role only, because in equilibrium it would never need to be incurred (e.g., the threat that an “altruistic punisher” will inflict harm on a norm violator suffices to deter the violation, so the costly punishment need never be meted out). To my understanding, however, Bowles and Gintis expected that the cost would be incurred on occasion, since behavioral human agents quite frequently find themselves to be engaged in “out of equilibrium” play. The preference cannot be said to be present, then, unless the agent would definitely act as required when the relevant conditions arise.

⁷ Another example of an “inconvenient truth” embraced by Gintis and Bowles at least from the mid-1990s onwards is the idea that viewing the outsider with distrust or even enmity has tended to be integral to strong in-group cooperation. Commitment to intellectual independence is already evident in Gintis and Bowles' work within a short time after the publication of *Schooling in Capitalist America*, as their writing increasingly embraced formal modeling centered on individual actors rather than economic classes, an approach criticized by orthodox Marxian economists as “methodological individualism.” The role of an above-market-clearing rent element in equilibrium pay, in Bowles and Gintis (1990), strikes me as yet another notable example of their willingness to deviate from Marx (1867), who seems committed to the idea that the capitalist pays the worker not a penny more than that amount at which another worker would be happy to step in to replace them.

Behavioral economics and Gintis's multi-disciplinary, multi-methodological social science

Was Gintis a behavioral economist? Insofar as a stream of research and publications emerged within late twentieth century economics that distinguished itself as studying how actual human beings as opposed to the stylized perfectly rational and selfish *Homo economicus* behave, Gintis was certainly a behavioral economist. The understanding of the nature of human development laid out in Gintis (1972) reads retrospectively as direct anticipation of modern behavioral economics. Along with Bowles and experimental economists like Fehr, Gintis played a significant part in expanding the scope of behavioral economics to include not only the kinds of cognitive shortcuts and quirks on which early figures like Herbert Simon, Daniel Kahneman and Richard Thaler focused, but also the emotional, social, and normative influences on behavior, subject matter hinted at by the title of a best-selling 1994 exposition of evolutionary psychology, *The Moral Animal* (Wright, 1994). While he was more at home with the specifics of Boyd and Richerson's gene-culture co-evolution approach than with the particulars favored by evolutionary psychology founders Cosmides and Tooby (emphasized by Wright) or sociobiology proponent E. O. Wilson, I would place Gintis's work within the same circle of my intellectual Venn diagram that includes all three strands of theorizing about human behavioral dispositions as products of evolutionary selection, a circle whose overlap with behavioral economics is conceptually large but until now still surprisingly underpopulated.

I find the Wright title to be resonant here because, while I recall that Wright's was not among Gintis's favorite books on evolution, I also know that Herb's thinking was evolutionary from top to bottom and recognized human-animal comparisons and continuities to be a fruitful venue for honing better understandings of "human nature." When I asked him, some time around 1999 or 2000, what he recommended reading about the emotional and biological underpinning of human nature, he suggested that I might try Frans de Waal, who had not long before put out the book *Good Natured* (de Waal, 1996) and had earlier broken into mass market non-fiction with the book *Chimpanzee Politics* (de Waal, 1982). I owe Herb big time for that one, as De Waal became one of my favorite authors for the next two decades.

To prepare for this section, I went back and read through something Herb wrote for a 2004 symposium in *JEBO* on a target article on gene-culture co-evolution by Joseph Henrich, a commentary titled "The genetic side of gene-culture coevolution: internalization of norms and prosocial emotions" (Gintis, 2004). Although Gintis was usually as much inclined to emphasize the cultural side of the equation as were Boyd, Richerson or Henrich, he spent much of that piece pointing out the ancient body-mediated emotional substrates which humans share with animals, and quoted approvingly neuroscientist Antonio Damasio's idea that the awareness of emotions in humans is represented by "somatic markers." To quote a few passages of the article (at pp. 63–64):

The experience of shame, guilt, and other visceral reactions plays a central role in sustaining cooperative relations. Prosocial emotions function like the basic emotion, "pain," in providing guides for action that bypass the explicit cognitive optimizing process that lies at the core of the standard behavioral model in economics. Damasio (1994, p. 173) calls these "somatic markers." A somatic marker is a bodily response that "forces attention on the negative outcome to which a given action may lead and functions as an automated alarm signal which says: Beware of danger ahead if you choose the option that leads to this outcome" ... "suffering puts us on notice ... it increases the probability that individuals will heed pain signals and act to avert their source or correct their consequences" (p. 264).

In a further biology-referencing remark, Gintis wrote:

... the capacity to express and experience emotions are human universals ... involving complex chains of hormonal, visceral, and non-cognitive neural responses that are rooted in our genetic constitution as a species.

He went on, however, to write:

While many human emotional responses have counterparts in vertebrates (Darwin, 1998), and especially in our closest relatives, the chimpanzees (de Waal, 2006), the prosocial emotions in non-humans are extremely rudimentary by comparison. From this, and their intimate association with the cultural forms that evoke them, we can conclude that human prosocial emotions coevolved with human nature.

In other words, Gintis the behavioral economist, who was also Gintis the political economist and Gintis the mathematician/game theorist, thought also like a cognitive theorist, a biologist, and an animal ethologist. The label behavioral economist can fit, then, but does a poor job of describing the multi-methodological approach and extraordinarily broad reading which he brought to the table.

Pushing forward the boundaries

The editors who proposed this collection of articles wrote of seeking contributions "that not only remember Gintis but actively engage with the intellectual challenges he championed, pushing forward the boundaries of knowledge in the diverse fields he influenced." I'm doubtful of my ability to do much additional pushing of boundaries after a quarter of a century of efforts in that direction. But the methodological remarks in the previous section gesture at what I would most like to amplify about Gintis's work. To restate, the visceral, biological substrate of human behavior, and the evolutionary lens on how it came to be what it is, seem to me to be the most important aspects of his approach that remain underappreciated by economists. My own understanding of human social behavior has been informed by nothing more than it has by sociobiological, evolutionary, neuroscientific and psychological approaches, with intellectual "heroes" including Darwin, Wilson,

de Waal, Damasio, LeDoux, Tomasello⁸, and Gintis, Bowles and Boyd themselves. But it has been difficult to find many within the experimental and behavioral economics domain who appear to value these dimensions as much as Gintis did. My favorite contributions using the experimental method have been ones that study social interaction and entertain the premise that people may be products of both biological and cultural evolutionary forces that permit them to perform better than would rational selfish agents in the face of dilemmas of social cooperation. Studies that consider that human nature also leaves room for antisocial impulses, even less propitious for human betterment than the social neutrality of a *Homo economicus*, seem equally important, given global trends that remind us of just how many people can be attracted by anti-humanistic creeds and leaders. As I review abstracts of recent papers, I fear that behavioral and experimental economics might be branching out in so many directions that such a research agenda on human social nature, which appeared prominent in the 1990s and early 2000s, is getting lost in a vast forest of thematically unconnected topics.

Beyond this, I would use these concluding remarks to suggest a normative challenge that I think reflects the spirit of what Gintis's work was all about. In the short article that I quoted above, Gintis wrote:

We humans ... have a 'primordial' objective function that does not well serve our fitness interests, and which is more or less successfully 'overridden' by our internalized norms. This primordial objective function knows nothing of 'thinking ahead,' but rather satisfies immediate desires. Lying, cheating, killing, stealing, and satisfying short-term bodily needs (wrath, lust, greed, gluttony, sloth) are all actions that produce immediate pleasure and drive-reduction, at the expense of our overall wellbeing in the long run. This fact explains the congenital weakness of human nature in its tendency to succumb to the unruly temptations of the flesh. (Gintis, 2004, pp. 62 – 63)

Though the passage has a surprisingly quaint and almost Christian feel, I find it to parallel, in a strange way, the columnist David Brooks' observations on the week of my writing these lines in April 2025. Brooks (2025) wrote that "civilizations" have built "alliances to promote peace, legal systems to peacefully settle disputes, scientific institutions to cure disease, ... and universities to preserve, transmit and advance the glories of our way of life" but that the agenda of the people now running what had been the world's oldest democracy is "about ego, appetite and acquisitiveness and is driven by a primal aversion to the higher elements of the human spirit – learning, compassion, scientific wonder, the pursuit of justice."

Where I want to go with this is toward the point that, while it is important that scholars continue to fit together the strands of mathematics, game theory, behavioral experiments, anthropology, psychology, and domains of knowledge for which we may not even have names yet, doing so in order to further improve our understanding, just as Gintis improved on the insights he inherited from predecessors including Adam Smith, Marx, Darwin, Talcott

Parsons and Maynard Smith, we might also commit to following a dictum about the organization of society itself: Marx's "the point, however, is to change it". It was in response to a crisis of values in modern society, one that has grown more dire during the early twenty-first century, that Gintis marshaled his energies to study and to try to understand the nature of human behavior, psychology, and organization. While presumably also inspired by what cried out to him as a moral imperative, my impression is that the "old master," Marx, had fallen into the trap of making a fetish of pretending that his analysis was entirely scientific and objective in nature. I greatly prefer the stance of Myrdal (1958) that social scientists should feel no need to hide the values that guide them when deciding what problems to study. We can count on the clash of ideas among us, along with the many different conceptual frameworks and values we bring to the table, to winnow out the less supportable approaches and to strengthen the ideas more successful at explaining and predicting society's workings. If the idea of actively engaging in discussions about how to improve institutions (including the childcare and educational environments that help to establish moral competencies) strikes some as stepping outside the bounds of our scholarly roles, I ask: do we want to tell economists working on poverty in the developing world to refrain from policy design and evaluation activities? Should economists also eschew active roles in health care reform, or avoid using their expertise to advance positions on what regulations are needed in the financial sector?

Like Ben-Ner and I in our edited book *Economics, Values and Organization* (Ben-Ner and Putterman, 1998), to which Bowles and Gintis, Fehr and Gächter, Amartya Sen and others contributed, I think that Herb Gintis shared the belief that if economists always insisted on being value neutral and if their discipline succeeded in convincing enough people that humans are nothing but selfish, then economic "science" would be helping to widen an already growing moral chasm into which modern society has been falling decade by decade. Fortunately, our scientific objectivity and our senses of social responsibility can align in the recognition that moral complexity, including receptivity to moral aspirations as well as social and self-image concerns, are inherent in our evolved human nature. We cannot promote the doctrine that human behavior is premised on greed only without straying from science itself. We can, however, lend our knowledge to projects of institution-building and social healing that might yet rescue some of the gains that seemed to have been won over the past quarter millennium prior to our current crisis. By helping to establish the facts about human moral nature and potential, as well as darker motives like spite, attraction to wealth and status, and penchant for manipulating others for our own gain, we might multiply the stock of knowledge that can be drawn on to foster social progress, just as gains in the sciences contributing to medical advances have been put to use boosting human health and reducing physical suffering. In brief, by treating values and norms as appropriate scientific subject matter and jettisoning their attachment to the *Homo economicus* model, economists could reduce their excessive focus on how to harness pure selfishness to push forward growth of the material economy, and could devote greater attention to helping society learn how to make the most of scarce moral resources and harness them for the common good.

⁸ See especially Tomasello (2019).

Author contributions

LP: Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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