

finkel, just to name a few. Note that keeping the different traditions of theorising alive and empirically studying social phenomena does not preclude an interest in the question of how these traditions relate to each other. In fact, it makes integrative efforts such as Herbert Gintis's insightful and thought-provoking *Individuality and Entanglement* all the more profound.

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#### Man, the Game Player: A Plea for Interdisciplinary Research

This book covers an impressive variety of topics. Gintis aims to provide no less than a rigorous unified theoretical foundation for economics, psychology, sociology, anthropology, political science, and sociobiology. Doing so, he combines formal modelling,

rational choice theory, game theory, and evolution theory to advance a transdisciplinary explanation of individual behaviour and the development of human societies. Because of its complexity, the book is certainly not an easy read. Moreover, it lacks a stringent line of argumentation and appears to be more like an edited volume presenting a collection of ideas from previously published articles. Still, it offers thought-provoking insights and, fortunately, the *Overview* preceding Chapter 1 provides some linkage between the discussed arguments and summarises the book's content in seven related themes.

The first theme is that society is a game structured by rules that can be changed by the players. The moral dimension of observing rules is the second theme. Individuals like playing by the rules and feel ashamed if they break them. The third theme is a rejection of economics' strict methodological individualism. Instead, human minds are socially entangled and cognition is distributed across social networks. According to the fourth theme, humans oftentimes act because they want to do the right thing. Morality thus has an important non-consequentialist dimension. The fifth theme describes human preferences as a mixture of self-regarding, other-regarding, and universal motivations and individuals trade off among them (sixth theme). Finally, the seventh theme stresses the importance of transdisciplinary research for getting a better understanding of human behaviour. Given the book's broad coverage of topics from different fields, I will not be able to address all aspects of the book adequately in this review. Hence, I will reflect on Gintis's work from the point of view of a political scientist with an interest in decision theory and the workings and origins of institutions, and I will focus my discussion on the content of chapters 1, 2, 3, 5, 6, 7, 8, and 12.

Chapter 1 'Gene-Culture Coevolution' uses the example of the development of

human communication to explain the reciprocal relationship between human culture and genes. Gintis portrays homo sapiens as a species whose individual fitness depends on the organisation of social life. Thus, the increased social relevance of communication promoted genetic changes that facilitated the development of speech. More generally, gene-culture coevolution helps to explain the existence of preferences that go beyond mere material self-interest such as humans' propensity to cooperate and preferences for fairness and equality. Norm-abiding individuals have an evolutionary advantage in comparison to norm violators who are likely to be killed or ostracised from society. From the point of view of political science, Chapter 2 'Zoon Politikon: The Evolutionary Origins of Human Socio-political Systems' is fascinating. Gintis explores the distinctive characteristics that differentiate homo sapiens from other species and identifies a unique political dimension of human social life. Thus, gene-cultural coevolution gave rise to homo ludens—man, the game player. Homo sapiens has the distinctive ability to create, maintain, and transform the social rules of human interactions. While other species are also playful, only homo sapiens has authority over the rules of the game. Hence, institutions are not exogenous restrictions of individual behaviour, but become endogenous to social interactions. Gintis continues to argue that the traditional rational choice model based on self-interested individuals cannot explain the rise of modern political institutions based on the idea of political equality. Hence, modern political systems presuppose a moral basis of decision making.

Chapter 3 'Distributive Effectivity: Political Theory and Rational Choice' opens with a strong and probably highly controversial claim: 'Behavioral disciplines are successful to the extent that they model individual behavior as rational choice' (p. 45). According to this view, the voting paradox poses a major challenge for rational choice

theorists. As the probability that an individual's vote changes the outcome of a modern mass-election converges on zero, the costs of voting almost certainly exceed the material benefits of participating in an election. From a traditional rational choice perspective, individuals should thus abstain in elections. Gintis, however, argues that individuals do not follow a strictly individual calculus. Instead, individual minds are socially entangled. Voters follow a logic that can be described as distributed effectivity, 'behaving in large elections rationally and strategically as if they were actually participating in a very small election' (pp. 59–60). In the following chapters, Gintis develops the decision-theoretic foundations of his argument. In Chapter 5 'Rational Choice Revealed and Defended' Gintis abandons classical instrumental or utilitarian definitions of rationality and instead defines rationality as preference consistency, i.e. completeness, transitivity, and independence of irrelevant alternatives. The actual content of preferences is explicitly not part of the definition. Hence, rationality is compatible with self-regarding (what we want for ourselves), other-regarding (our concern about others' wellbeing), and universal (non-consequentialist character virtues) motivations.

While Chapter 5 focuses on the individual level, Chapter 6 'An Analytical Core for Sociology' deals with the interactions of individuals on the macro level. Here, Gintis employs game theory and complexity theory to explore socialisation and the internalisation of norms. Chapter 7 'The Theory of Action Reclaimed' constitutes a sweeping critique of Talcott Parsons's cultural model of socialisation. Rather than treating norms and values as binding constraints on individual action, Gintis argues that individuals constantly trade off between self-interest and moral aspects. Norms should thus be modelled as a component in an individual's preference ordering.

From my point of view, Chapter 8 'The Evolution of Property' provides a very in-

teresting and innovative interpretation of the endowment effect. This effect describes a well-known phenomenon according to which individuals value an object that they possess higher than the same object when they do not possess it. Similarly, individuals prefer to avoid losses rather than to acquire gains of a similar amount. While loss aversion is often seen as an irrational phenomenon, Gintis (p. 165) argues that it is a strongly fitness-enhancing predisposition in humans, similar to motivations in other species, that give rise to territorial behaviour. Hence, humans have a natural propensity to recognise property rights because an incumbent is willing to commit larger resources to defend a certain good than a possible invader is willing to invest to acquire it. Chapter 12, the final chapter, outlines the vision of 'The Future of the Behavioral Sciences'. Gintis argues that the current state of the social sciences prevents truly interdisciplinary collaboration because we lack a common coherent analytical foundation. Such a foundation could be provided by economics with its emphasis on the rational actor model and game theory.

Overall, *Individuality and Entanglement* offers fascinating insights into decision theory and possible further advances for the social sciences, economics, and sociobiology, and I agree with many of Gintis's ideas. In particular, incorporating social preferences and moral considerations alongside standard self-interested motivations in rational choice models has enormous potential to improve our understanding of human behaviour and social interactions. However, Gintis did not have to convince me, because I was already a proponent of a wide version of rational choice theory before reading the book. I am not sure whether *Individuality and Entanglement* will gain Gintis many new followers. Gintis's style of writing is very direct and sometimes polemic. The book thus reads more like a strong statement of his point of view rather than an attempt to

persuade possible critics of his position. I do not share Gintis's pessimistic assessment that interdisciplinary collaboration has been rare in the social sciences (p. 267). Of course, such interdisciplinary research exists, the best example is the work headed by Elinor Ostrom in collaboration with an extensive number of colleagues from various disciplines, such as economics, political science, sociology, anthropology, biology and many more, on the management of various common pool resources around the world. In fact, I found it rather strange that *Individuality and Entanglement* does not contain a single citation of Ostrom's work, even though the parallels are striking. Thus, Ostrom [1998, 2005] also promotes a behavioural approach to rational choice theory that takes the social preferences and moral aspects of individuals' motivations seriously. Moreover, she is a great proponent of interdisciplinary research [see Poeteete, Janssen and Ostrom 2010].

Furthermore, *Individuality and Entanglement* left me with one big open question. In his characterisation of human beings as *homo ludens*—man the game player—Gintis stresses our ability to create, change and maintain the rules of the game. Hence, the political dimension of our behaviour, i.e. having authority over political institutions, is the critical feature that distinguishes us from other playful species. In light of the great importance of political institutions, I would like to learn more about Gintis's ideas concerning institutional theory. For example, how do institutions affect individual behaviour and human interactions? How can we explain institutional change within his framework? Unfortunately, answers to these questions are largely missing in the book. Maybe Gintis will address these questions in greater detail in future publications.

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## Entanglement in Concrete Interactions

Herbert Gintis's *Individuality and Entanglement* is an impressive, humbling book. The depth and the breadth of the knowledge of the behavioural sciences that went into it is truly remarkable. The contrast to the narrow (sub-)disciplinary fragmentation characteristic of so much research today could not be larger. A stimulating and much-needed invitation to interdisciplinary debates about the possibility to develop a unifying core of the social sciences! While I highly appreciate the invitation to have such debates, *Individuality and Entanglement* at times reads as if its goal was to settle them. This would be an exaggeration, but it certainly is an important step.

It is a rich and somewhat eclectic book. Its central claims include that people behave rationally. Not in the sense of a narrow instrumental rationality, but one in which self-regarding, other-regarding, and broader moral preferences are traded off. Underlying this argument is an evolutionary theory that provides a relational account of human behaviour. Methodological individualism, in fact, is one of villains in this story. Moreover, Gintis stresses social norms and roles as crucial for understanding social behaviour. This is because roles and norms are enforced through social sanctions or because people have internalised them so that compliance becomes emotionally rewarding. These are,

of course, themes and arguments that are rather familiar (and, on a general level, broadly acceptable) for sociologists. My hunch is that many sociologists would also be inclined to say that one could go further than that. For instance, instead of saying that preferences are context-dependent, one could theorise in a general manner the mechanisms through which specific properties of situations influence preferences. Or, instead of saying that self-interest and moral values are traded off, one could specify the social forces that underlie either motivation. Social theorists have done this on a fairly general level.

An example will follow below, but before this, a quick comment on the rational actor model. Gintis's extremely flexible version might be less controversial than he expects. The problem is not, as Gintis seems to believe, that sociologists would reject the model as inaccurate. Rather, many probably simply do not find it helpful. 'It is important to understand', he writes, 'that the rational actor model says *nothing* about how individuals form their subjective priors, or in other words, their *beliefs*'. (p. 91) But often the goal of our research is to explain preferences or beliefs. Measuring preferences can be incredibly difficult, so that a purely empirical approach is not viable. Hence, even if we would all agree on the rational choice model as the best way to express preferences, we still would be forced to eclectically draw on middle-range theories to explain these preferences. I do not see how that would overcome the problems of fragmentation described in the book. So, while I am convinced by Gintis's trenchant critique of 'disciplinary provincialism', again, I think something more is needed to provide the unifying framework he is hoping for. In his words, 'Understanding the content of preferences requires rather deep forays into the psychology of goal-directed and intentional behavior ....' (p. 88). I believe these 'deep forays' is what we should focus our energy on.