

best work in forging bridges across disciplines or exploring the interstices between them. He had little patience with claims about timeless truths in social life, and built his optimism, what he called his “bias for hope,” around the ever-present possibility of finding “an entirely new way of turning a historical corner.”

Adelman’s richly detailed and highly readable biography provides a valuable introduction to the life and work of a scholar who was unmoved by the proclivity of economists and other social scientists to draw sweeping conclusions from simplified assumptions. As he said in a late essay, “after so many failed prophecies, is it not in the interest of social science to embrace complexity, be it at some sacrifice of its claim to predictive power?” (*Rival Views of Market Society*, p. 139).

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### C Mathematical and Quantitative Methods

*Jane Austen, Game Theorist*. By Michael Suk-Young Chwe. Princeton and Oxford: Princeton University Press, 2013. Pp. xii, 272. \$35.00. ISBN 978-0-691-15576-0.

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When first I saw the title in the pages of the *New York Times*, my cereal passed through my nose, rather than down my throat. It was a literal instance of ventilating an opinion. Is this another Austen mashup? No. It is a serious attempt to argue that the popular Regency

author (paragraph one, page one, chapter one), “. . . *systematically* explored the *core* ideas of Game Theory in her six novels, roughly two hundred years ago.”

The emphasis is mine. Michael Chwe, whom some readers of this journal will recognize as the author of a delightful paper on “far-sighted stability,” has set himself a hard task. The words I chose to emphasize in the quote above highlight the challenge. It is insufficient, for example, to identify episodic displays of strategic insight in her work. Furthermore, these ideas must correspond to what might be considered the core ideas of game theory. Austen will clearly not help in this endeavor, and so Chwe must support his claims with, “. . . a preponderance of indirect evidence.” (p. 7).

Slippery stuff. If the bar is set too low, every Harlequin romance is a treatise on strategy. Does Chwe succeed? In my view, no. In what follows, I summarize each chapter and, when relevant, explain why I find some of the arguments advanced unpersuasive.

First, I dispose of the chapters I think tangential to the task Chwe sets himself.

#### Chapter 2

The chapter has two goals. The first is to convey some of the formalism of game theory through the introduction of game trees and payoff tables and explain why this is useful. For the cognoscenti, this will be dull. For the unwashed, it seems a high cost for a small payoff. None of this formalism is deployed in the subsequent analysis of Austen’s writings. The reward for the reader’s patience with chapter 2 is the lesson that such formalizations can reveal hidden similarities between apparently different contexts. Omitted is a discussion of how such formalisms force one to be explicit about who is an actor and who is not. To illustrate, Chwe builds a game tree around an event in *Mansfield Park*. The tree begins with the fact that Betsy has stolen a cherished knife from her older sister, Susan. An even older sister, Fanny, intervenes. The tree is developed as if Betsy and Fanny are the only actors in this drama. The alert reader will ask why Susan, the victim, is not also an actor in this drama. Why are

her intentions and possible choices left out of the analysis? The issue of who is or is not a player in the game is one of the important difficulties in game theoretic modeling. Given the importance to Chwe of the notion of *cluelessness*, of which more later, this omission is a puzzle.

The second goal is to appeal to “critics” of game theory. For a late-in-life convert to game theory like myself, I can only say, why bother? These critics, as Pauli might have said, “are not even wrong.”

### *Chapters 3 and 4*

In these chapters, Chwe seeks to document strategic insights that appear in African American folk tales. He goes on to argue that some of these insights were inspirations for certain civil disobedience strategies of the oppressed. These chapters also introduce the notion of cluelessness and a suggestion of why it is important. As this notion is explored in greater detail in the last chapter of the book, one can skip these chapters without missing the main argument.

### *Chapter 5*

Chapter 5 is a *CliffsNotes* summary of the contents of Austen’s novels.

It is in the remaining chapters that Chwe must show that Austen’s novels provide a systematic exploration of the core concepts of game theory via indirect evidence. The indirect evidence is in the form of vignettes from the novels that are never formally specified as a game. It’s as if one is asked to observe choices made at one node of a game tree that is never defined to derive insights. By my estimation, every strategic situation from an Austen novel exhibited could be modeled as either a coordination game (A wishes to express her warm sentiments for B only if B will reciprocate them and not otherwise) or an elementary principal-agent problem (A would like B to perform a task that B would decline unless A can identify some reward to induce B to do so). We do not, for example, learn from Austen how to play a zero-sum game of complete information. For

someone who claims on p. 183 that, “Austen’s novels are game theory textbooks,” this is a major omission. The writer C. S. Forester, in contrast, dominates on this dimension. The *first* story Forester relates involving his hero, Hornblower, (*The Even Chance*) is about the use of randomization to limit the advantage of a stronger opponent in a duel. Indeed, one might read Hornblower as Forester placing his hero in a succession of games of increasing complexity with a new principle being learned at the termination of each play.

There are no examples in Austen of extensive form games involving more than two levels. On the other hand, P. C. Wren’s ripping yarn, *Beau Geste*, has an extensive form game of at least 5 levels where the narrator *consciously* decides to see the game from his rival’s perspective to determine what must be done. Layered on top is that the payoffs of the game depend on an unknown state of nature, of which some players possess a noisy signal.

My comparison to Forester and Wren is made to support three points. First, the simplicity of the games considered by Austen mean that she couldn’t have identified the core concepts of game theory. Second, given that *lesser* authors have considered strategic situations that are more complex than Austen has, how serious a game theorist is Austen? Third, these lesser authors have their characters reason *explicitly* about what is to be done. One does not need to rely on *indirect* evidence in their case. Why must we do so for Austen?

That Austen ignores randomization is a sign of how “small-bore” my thinking is. Very well, let us turn to the core ideas that Chwe believes Austen identifies.

### *Chapter 6*

According to Chwe, we learn the following from Austen (in his words):

- a) A person takes an action because she chooses to do so (p. 97).
- b) A person chooses the action with the highest payoff (p. 97).
- c) Before taking an action, a person thinks about how others will act (p. 97).

- d) A person's preferences are best revealed by her choices (p.97).

I am persuaded that a close reading of Austen (as well as *Hornblower*) will yield such a list. These are (as the title of the chapter suggests) the necessary groundwork to the analysis of a strategic situation.

An odd feature of this chapter is its last section about the "eyes." Austen, apparently, believed that one may infer a person's preferences from his or her eyes. Thus, the strategically sophisticated, like Elizabeth Bennet, pay attention to the eyes. If so, why don't the strategically sophisticated "shade" their eyes to prevent their intentions being read? If they do so, then nothing useful can be read from the eyes. Unless, of course, the movement of one's eyes is entirely involuntary, in which case the strategically sophisticated are blessed with a form of X-ray vision that lesser mortals are not. But, then why does it fail them at critical junctures? For example, why does the sophisticated Elizabeth Bennet believe the cad Wickham's description of Darcy?

### Chapter 7

Here Chwe argues that Austen considers, contrasts, and ultimately dismisses alternative (to what is enumerated in chapter 6) models of behavior. This is an interesting chapter. I was hard put to identify another novelist for whom I could imagine making such a case.

### Chapter 8

Here Chwe argues that Austen anticipates and responds to a variety of caricatures of what strategic reasoning involves. This appears directed towards the critics of game theory.

### Chapter 9

Here Chwe argues that Austen has contributed five insights "not yet superseded by modern social science" (p. 1). This chapter discusses four of them. A subsequent chapter is devoted to the fifth. I cannot share his enthusiasm about the first four ideas. Here is

one insight described by the author (p. 141): ". . . Austen argues that strategic thinking in concert forms the basis of the closest human relationships."

I don't deny the plausibility of this interpretation of Austen's writings. I do deny that this is a reasonable insight to be gleaned from the evidence that Austen offers. Chwe notes that the central couple in each novel, whose eventual nuptials are the climax of the novel, invariably work together strategically. I assert that these strategic partnerships are a consequence of the fact that the couple share identical goals. The presence at one time of such a partnership before marriage is not evidence that such partnerships are a basis for the "closest human relationships." Austen does not allow us to observe what happens to the happy couple *after* marriage. To be flippant, when we observe them play "battle of the sexes," only then will we know just how close they are.

One might argue that, in some of the novels, at least one member of the couple must contend with friends and relatives who oppose the nuptials. Insofar as the relevant member of the couple cares for the feelings of others, pursuing the goal of marriage is costly. In this case, it is not the strategic partnership that is the foundation of the future relationship. Rather, the agreement to participate in such a partnership is the significant event. It is a costly signal of commitment sent by one member of the couple to the other.

The three other claimed innovations are a dual self-model, mechanisms for altering preferences, and the notion of constancy.

### Chapter 10

This chapter recounts instances in Austen's novels where she illustrates the disadvantages of strategic thinking. Some are obvious, like being cognitively costly. Others, like overestimating the skill of others, do not distinguish between reasoning correctly from beliefs and having correct beliefs. There are a number of occasions where Austen (via Chwe) dismisses some character as strategically unsophisticated because he or she best responded to "wrong" beliefs (see, for example, the discussion of Collins' proposal to

Elizabeth Bennet on p. 111). As nowhere is it argued that Austen proposed a notion of equilibrium, why should we dismiss someone as being unsophisticated if the ex post realization of an action went against them?

Missing is a list of disadvantages of nonstrategic thinking. A systematic account would presumably weigh the drawbacks of each and come down in favor of one, warts and all.

### Chapter 11

Here Chwe argues that the strategic insights he credits to Austen are not spandrels; their presence in her novels is intentional.

### Chapter 12

This chapter is devoted to what Chwe considers to be Austen's fifth and most important innovation, which he calls cluelessness. It is the tendency to overlook the fact, "that other people make their own decisions according to their own preferences" (page 188). Chwe traces five sources of this tendency in Austen's novels:

- a) Simple lack of ability.
- b) Social distance. That is, the more unlike the "other" is, the harder it is to see the world as the "other" does.
- c) Others think as you do.
- d) Status maintenance; the patrician should not sully herself with contemplation of the thoughts of the plebeian.
- e) I can control your preferences.

One may argue over whether this list is mutually exclusive, whether this notion can be distinguished from empathy or whether it should have been called unawareness is no more than a lack of common knowledge. Minor points. The major point is to identify causes for the blindness of some to the agency of others. It is very possible Austen (as channeled by Chwe) is onto something here (but may be pipped at the post by the Bard himself: *King Lear*, *Richard III*). There have been a number of experiments that suggest that individuals higher up the greasy pole give short shrift to those farther down. Nevertheless, it does not follow that,

because the patrician ignores the plebeian in a nonstrategic setting, the patrician does so in a strategic setting.

Why might "cluelessness" be useful? Chwe's answer is that it explains strategic blunders. It does, as Chwe compellingly argues, explain why Lady Catherine (*Pride and Prejudice*) becomes the unwitting messenger of Elizabeth Bennet's affections for Darcy. However, what blunders can it not explain?

### Chapter 13

Here, some suggestive explanations of other blunders (Vietnam, Fallujah), in terms of cluelessness on the part of prominent participants, are offered. They are far from complete. First, it is taken as obvious that certain decisions are blunders because of adverse outcomes ex post. Anyone can identify a bubble after it has burst, but rarely before. Second, there is no analysis of the alternative choices available at the relevant time to the actors. Third, the large-scale events described involve choices made not by a single individual, but in concert with others. While one individual has the authority to make the choice, they do so only after deliberation, discussion, and buy-in from a group whose members may have conflicting agendas.

### Chapter 14

In which the author binds together the disparate points of the book into a concluding message designed to move game theory "forward into broad, sunlit uplands."

Should you read this book? If you are a literary critic in search of a novel way to look at a text, yes. If you are looking for material to use to respond to critics of game theory, read chapters 3, 4, and 7. If you are looking for an interesting new idea that might have some legs, read chapters 12 and 13. If you are interested in learning some game theory, no. And neither will you learn it from Jane Austen.

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*Dynamic Models for Volatility and Heavy Tails: With Applications to Financial and*