

Book Review

Michael Chwe: Jane Austen, Game Theorist

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1. Introduction

Jane Austen (1775–1817) has written six novels which are mainly concerned with young adults searching for a suitable partner in marriage. Michael Suk-Young Chwe, a renowned economist and political scientist working at the University of California, Los Angeles, has written a book about Austen's novels. In Chwe's words: "For Austen, choice is a central concern, even obsession. The single most important choice is a woman's choice of whether and whom to marry [...]." (97)¹ Chwe presents an insightful analysis of these novels in terms of choice, preferences, emotions, manipulation, status, empathy. . .

Chwe argues forcefully and convincingly that game theorists can learn a lot from reading Austen: "[E]xploring strategic thinking, theoretically and not just for practical advantage, is Austen's explicit intention. Austen is a theoretician of strategic thinking, in her own words, an 'imaginist'. Austen's novels do not simply provide 'case material' for the game theorist to analyze, but are themselves an ambitious theoretical project, with insights not yet superseded by modern social science." (1) These are surely bold claims. And Chwe is serious about the title of his book: Jane Austen, game theorist.

2. Michael Chwe, Game Theorist

We will discuss later whether Jane Austen should be considered a game theorist. It is clear, however, that Michael Chwe is a skillful presenter of game theory. For example, Chwe (19f.) illustrates the stag-hunt game (to employ the term normally used in game-theory books) with Shakespeare's "Much Ado about Nothing" and Richard Wright's autobiography "Black Boy". We also like how Chwe introduces backward induction. He does not start with the full tree and identifies subtrees later. Instead, he starts with the (two) subtrees and explains the best decisions to be taken in these trees. "But which of these two situations

¹ All quotations without an explicit author refer to Chwe's book. This holds also for Austen's novels where different editions show different pagination.

takes place is up to” (12) the agent who moves first. In a similar procedure he builds a Bayesian tree (in mind, not graphically) when solving the “Flossie and the Fox” game (43f.).

Michael Chwe also takes Austen’s novels as a suitable occasion to defend game theory against unwarranted criticism or imagined limitations. For example, game theory is certainly not a capitalist undertaking (26f.). Nor does payoff maximization imply anything about whether the person modeled is “expressive or instrumental, altruistic or selfish, cruel or kind” (25). In *chapter 8*, he shows that Austen would also not subscribe to a limited view of strategic thinking.

3. Jane Austen’s Understanding of Common Economic Terms

Chwe reads Austen’s novels with an economic mind, always identifying passages that can be interpreted by using terms like opportunity cost, preferences, revealed preferences and the like. Austen apparently has quite clear notions about

- preferences:

Austen discusses how preferences are formed and how they evolve. Economists normally work with given preferences that are complete. The decision problem is already solved in such a setting. Austen is much more realistic in dealing with contradictory reasons to choose one action rather than another. Chwe observes Austen’s assumption that pros and cons can be weighed against each other. He uses the word “commensurability” (102f.) which is another and rather nice expression for completeness. Indeed, whenever you can weigh an advantage against a disadvantage in another sphere, you can come to a final conclusion, i.e., you have complete preferences.

Over time, preferences may evolve in one direction or another. Chwe identifies how these changes may come about in Austen’s characters (158f.): by gratitude, fear of death, love, changing reference points, flattery, and others.

- revealed preferences:

Chwe presents a convincing example for revealed preferences from *Pride and Prejudice*. Jane is reluctant to enter into a marriage with Mr. Bingley because she knows his sisters to be against it. Jane’s sister Elizabeth clearly employs revealed preferences by saying: “[I]f upon mature deliberation, you find that the misery of disobliging his two sisters is more than equivalent to the happiness of being his wife, I advise you by all means to refuse him.” (105)

- feasible sets:

On one level, the feasible sets are clear. For women, the feasible set consists of eligible men, for men, of women of a suitable age. However, it is

most important that men and women have chances to meet. Chwe shows which tricks are used by Austen's characters to make these meetings happen or to prevent them.

- opportunity cost and thinking in alternatives:
This idea is put very nicely in *Emma* (101): "We must consider what Miss Fairfax quits, before we condemn her taste for what she goes to." Opportunity cost can also refer to contingencies. For example, Henry Tilney (NA, 217) says that "our pleasures in this world are always to be paid for, and that we often purchase them at a great disadvantage, giving ready-moned actual happiness for a draft on the future, that may not be honoured". For Chwe, the interesting point is that Henry "equates happiness with money". True, but the other huge point is that Henry (and Austen) had an idea about expected payoffs.

4. Jane Austen, Innovator

Chwe exhibits a very open mind by readily accepting Austen's teaching of strategic matters. Chwe mentions five innovations (advances in game theory), four in *chapter 9* and one in *chapter 12*. Let us mention three of them.

1. Austen often describes how two people join forces to manipulate a third one. For example, Emma figures "how fundamental strategic partnership is to her idea of marriage" (143).
2. Chwe reads some passages as foreshadowing modern analyses of multiple-self approaches in decision theory.
3. Austen's most fundamental innovation, according to Chwe and using his term, is "cluelessness". Chwe does not only demonstrate how strategic stupidity shows up in her characters, but also provides modern-day examples.

5. Jane Austen, Game Theorist?

Is Jane Austen a game theorist? Of course, the British novelist covers many subjects that can be rephrased in terms of choices, preferences and revealed preferences (see *chapter 6* in Chwe's book). However, this does not show that Austen is a game theorist. It is the other way around: Game theory's central concepts are well chosen and relate to everyday life and literature in a helpful manner.

If Austen were a game theorist, she would have had some notions of a strategy or an equilibrium. The current reviewers think that she had none of these. This is clear from Chwe's section about "Names for Strategic Thinking" (*chapter 6*) such as penetration, foresight, sagacity, engaging in schemes or meddling. Also, to the mind of the reviewers, Austen was not even close to predate Cournot in developing (an informal conception of) the Nash equilibrium.

It can certainly be admitted that Austen may well have had some informal model of a game tree in mind (see, for example, Chwe's discussion of Fanny's present of a knife to her sister in *chapter 2*). This, of course, does not prove a lot about Austen's status as a game theorist. After all, informal notions of game trees and even of backward induction, are not a modern achievement (see, for example, Wiese 2012). Here, it is interesting to note that Austen makes Henry Tilney say: "[I]n both, man has the advantage of choice, woman only the power of refusal." (70) From this and other passages, Chwe draws the (presumably) correct conclusion that "to make a choice is almost always a good thing for Austen" (98). According to Austen, men (who are the first movers) enjoy an advantage over women (who are second movers). Of course, a game theorist (armed with game trees) could easily and profitably discuss whether or not a first-mover advantage exists.

In most parts of the book, Chwe is quite explicit about "Jane Austen, game theorist". He even considers her novels "game theory textbooks" (183). However, Chwe is more cautious a few pages above: "Regardless of whether Austen intends to impart game theory in her novels, it is up to the reader to receive it." (180)

To our mind, Jane Austen is not a game theorist, she is a strategist. This is not meant to belittle her contribution to economic thinking. Indeed, game theory is just an important and useful tool to develop strategic thinking. At the same time, there are important aspects of strategizing that have not been considered by game theory for different reasons. The innovator Austen may still give future game theorists food for thought.

Of course, Chwe himself may have been a good strategist when choosing the slightly incorrect, but catchy title of his book. In Austen's words, Chwe engages in a cunning and artful scheme exhibiting penetration and sagacity (107f.).

6. Minor Criticism

We liked Chwe's book a lot and have only some minor critical points:

- It is not quite clear why "Flossie and the Fox" or Shakespeare's "Much Ado about Nothing" belong in the current volume. In any case, Chwe does not mention that Austen probably knew "Much Ado about Nothing" well and some of her characters show parallels with Shakespeare's protagonists (as argued by Harris 2011, 44).
- It is a pity that Chwe does not give any hints on how modern game theorists nowadays deal with Austen's innovations or how these might be taken up in the future.
- Chwe uses *chapter 5* to familiarize the reader with the six novels. The reader would have appreciated relationship diagrams for the six novels. For example, relations like 'sister of' or 'husband of x, but elopes with

y later' should be very helpful to summarize and remember the main threads.

- Sometimes, Chwe exaggerates the strategic abilities of Austen's characters. For example, he claims (69) that *Northanger Abbey's* Catherine readily retorts John Thorpe's allusion to their common future (see Austen 2000, vol. I, chapter XV, 84) while it becomes very clear later that Catherine just did not understand John's intentions (see Austen 2000, vol. II, chapter III, 99). Indeed, John's sister Isabella exclaims: "His attentions were such that a child must have noticed."

7. Summary

Michael Suk-Young Chwe has written a book worth reading. You may be an Austen enthusiast who likes a new outlook on your favorite author. Read the book and do not be afraid of game theory. Chwe explains it well to beginners. You may be an economist or a political scientist. Then you will also profitably read this book. You may remember some interesting examples, enjoy Chwe's thoughtful discussion of game theory, or work on Austen's innovations. Chwe's book may inspire game theorists to read one or two Austen novels. A final word of warning to students facing game-theory exams: Reading Austen is not a substitute for 'proper' game theory textbooks (with definitions of Nash equilibria etc.).

References

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