

The Use (and Abuse) of Robinson Crusoe in Neoclassical Economics

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1. A Classic and the Many Ways of Reading It

When Daniel Defoe (1660–1731) published *Robinson Crusoe*—or, to use its original title, *The Life and Strange Surprizing Adventures of Robinson Crusoe, of York, Mariner*—in 1719, it became an instant success.¹ In the same year several further editions had to be printed to satisfy demand. Not one to let an opportunity to make money go by, Defoe followed up with a sequel (*The Farther Adventures of Robinson Crusoe*) already in 1719 and another one (*Serious Reflections during the Life and Surprising Adventures of Robinson Crusoe*) one year later. However, it is only the first book that attained the status of a classic. For almost three centuries it never went out of fashion, and it is still being read today. Even those who never had it in their hands know the main part of the plot, and hearing the name Robinson Crusoe conjures up images of a castaway on a solitary island in almost everybody.

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1. In what follows I shall quote from the 2007 Oxford University Press edition (only referring to page numbers), which is based on the first-edition text established by J. Donald Crowley. It contains helpful explanatory notes (e.g., on the political and historical allusions in the text), a glossary of nautical terms and other unfamiliar or obsolete words, and an introductory essay by Thomas Keymer that describes the life of Defoe and the historical context of his most famous work.

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Classics can be read in a variety of ways, and this is especially true of *Robinson Crusoe*. Firstly, you may simply read it as an adventure story—an exciting and fascinating adventure story. But beyond the entertainment to be enjoyed there is much more to be found in *Robinson Crusoe*. It can be read from the point of view of history, of politics, of religion, of philosophy, of literary history, and of economics. Students of all these (and probably still other) disciplines will find something important or, at least, interesting in *Robinson Crusoe*.²

Economists, in particular, were (and still are) fascinated by *Robinson Crusoe*. Basically, it is possible for economists to make use of Defoe's novel in two ways—one obvious, the other less so. Firstly, economic historians may learn something about mercantilism and the controversies surrounding it, about finance and banking, foreign and overseas trade, the slave trade, government monopolies, colonial economies, plantations, and about other features of economic life in the early eighteenth century.³ Secondly, and more interestingly, *Robinson Crusoe* also was (and is still being) used to support economic theory—that is, to illustrate, explain, or even justify it.⁴ In general, the references to *Robinson Crusoe* are few and far between: Marx (1890, 43) uses him once to illustrate his labor theory of value, there is one ambitious reading of *Robinson Crusoe* as an example of Marxian primitive accumulation (Hymer 1971), and some (nonaffiliated) authors refer to Defoe's hero now and then (e.g., Bastiat 1851, 79, 111–12, 189–92, 230–32; Binswanger 2006, 192–203, 307–10; Blaug 1997, 400; Oswald 1920, 107–13). There is one glaring exception, however: neoclassical economics. Ever since its earliest beginnings this school of thought has more or less appropriated Robinson Crusoe as one of their own. He makes his appearance in the writings of almost all of the neoclassical pioneers, and we still encounter him in modern textbooks (see, e.g., Niehans 1990, 276; Stilwell 1975; Varian 1992, 349–51; and Varian 2010, 609–30).⁵

2. For the many possible ways to read and interpret Robinson Crusoe, see, e.g., Keymer 2007; Novak 1963, 1983; and Watt 1951.

3. For the economic history reading of Robinson Crusoe, see, e.g., Novak 1976. Craufurd Goodwin (2011) interprets *Robinson Crusoe* as an early plea for international trade, colonization, and globalization.

4. Michael White (1982, 1987) describes the use of *Robinson Crusoe* in support of economic theories from a literary point of view.

5. In this article, what exactly is meant by “neoclassical economics”? This term may not be uncontroversial (see, e.g., Niehans 1990, 163), but it is almost universally used for the school of economics that came into being in the middle of the nineteenth century and developed into the dominant way of thinking about the economy. The “hard core” of mainstream, orthodox

Why did Robinson Crusoe, the fictitious character, become so popular with the neoclassicals? Because he embodies the laws of neoclassical economics in their purest form? Because he represents a convenient pedagogical device? And what do the many references to Robinson Crusoe say about neoclassical economics? In what follows I will try to answer these—and related other—questions. To that purpose I first present the different ways the early neoclassical economists made use of Robinson Crusoe (section 2), proceed to ask whether they were justified in doing so at all (section 3), and, finally, discuss the relevance of this astonishing phenomenon for neoclassical economics in general (section 4).

2. Robinson Crusoe as the Archetypical Economic Man of Neoclassical Economics

Basically, there are three ways of making use of Robinson Crusoe. Firstly, you may refer to the original, to *the* Robinson Crusoe as conceived by Defoe. In this case authors often mention Defoe's name or quote literally from his book. Secondly, it is possible to make up some isolated individual on an island. If he is to have a name at all, he will for certain be called Robinson Crusoe or just Robinson—in order to avail oneself of the fame of Defoe's hero, whose name has become an eponym for castaways, and thus to enliven the imagination of the reader. Telltale signs for this approach are the omission of Defoe's name and calling the isolated individual *a* or *some* Robinson Crusoe or just *a* or *some* Robinson. Thirdly, it is also possible to draw upon “second-hand” Robinson Crusoe stories. The immense success of Robinson Crusoe soon gave rise to imitations. Both in England and on the Continent many Robinson Crusoe tales were produced, some of which even used the name of Robinson Crusoe for their hero.⁶

economics contains features like marginalism, formalism, the focus on equilibria, and methodological individualism. Of course, the neoclassical “research program” took some time to become established, and not all elements of what today is regarded as the neoclassical “hard core” (to use Lakatosian terms) were present from the beginning. But always there has been a “leitmotiv” for the development of neoclassical economics—marginalism, its central and most important element (inextricably linked, in the beginning, to the subjective theory of value through the identification of marginal utility and value). Thus, all early neoclassicals were marginalists but not all of them also used mathematical models or focused on equilibria. For example, Carl Menger abhorred mathematical reasoning and was not at all interested in equilibria; and Eugen von Böhm-Bawerk worked out an equilibrium theory of interest but was as averse to mathematics as Menger. Because of ambiguous cases such as these, one might be inclined to substitute the term *marginalists* for “(early) neoclassicals.” However, intending to stress the continuity of the development of neoclassical economics, I preferred the latter term.

6. For a short survey of these “Robinsonades,” see, e.g., Keymer 2007, xv–xvi.

During the long career of Robinson Crusoe in neoclassical economics all three approaches have been pursued—with their relative importance having changed considerably in the course of time. At first—not surprisingly—the original Robinson Crusoe was used. But very soon the second alternative began to appear in the economic literature. This alternative grew more and more dominant and by now has completely displaced its rivals. Authors of modern textbooks feel free to invent any story fitting their purpose and to call the story's hero Robinson Crusoe—no matter whether he bears any resemblance to the original (except for the fact, of course, that he is living alone or with no one but Friday on an island). For example, Frank Stilwell (1975, chaps. 2, 4) has his Robinson produce wine—something Defoe's hero never did; and in Varian 2010, chap. 30, Robinson and Friday gather coconuts—although, for all we know, there were no coconut trees on the island. The third approach (referring to a secondhand Robinson Crusoe) is extremely rare. In fact, to the best of my knowledge, there is only one case, albeit an important one (see below).

Now, what exactly do the Robinson Crusoe stories of neoclassical economics look like? We will pay close attention only to the stories of the early neoclassicals—not only because it was they who started this tradition and whose possible motives for doing so are particularly interesting, but also because a closer analysis of modern authors would not be worthwhile, since their stories are immune to the kind of criticism we intend to present in the next section (see footnote 21 and section 4 for more details).

When, in 1776, Adam Smith published his *Wealth of Nations* and thus founded the classical school of economics, Robinson Crusoe had long since become a household name. Nonetheless, neither Smith nor, for all I know, any of his followers made use of Robinson Crusoe stories.⁷ On the contrary, the only classical economist who so much as mentioned Robinson Crusoe, Richard Whately (1787–1863), explicitly denied any relevance of isolated individuals for political economy (Whately 1831, 7). Characteristically, the very first economist who quoted Robinson Crusoe in support of his theories was William Foster Lloyd (1794–1852)—a neoclassical *avant le lettre*. If you had to choose a date for the beginning of neoclassical economics, it would have to be 1854—the year Hermann Heinrich Gossen

7. Therefore, Marx (1974, 5–6; 1890, 43) is wrong when he criticizes Smith and Ricardo for using “Robinsonades.” They speculated now and then about the economic relations in primitive societies, but they never invoked isolated individuals.

published his *Gesetze*, which contained the two basic building blocks of consumer theory: the principle of diminishing marginal utility and the solution to the problem of maximizing consumer utility (videlicet, equating the marginal utilities of the various consumer goods relative to their prices).⁸ Before Gossen there were authors who delineated parts of what would become neoclassical consumer theory. One of these predecessors was Lloyd, who in his *Lecture on the Notion of Value* (1834) for the first time explicitly stated the principle of diminishing marginal utility, although his terminology differs from modern usage: marginal utility is called “value” while total utility is referred to simply as “utility.” After explaining his idea with the usual examples, he points out that the concept of value (or, marginal utility) does not depend on markets or exchange but is equally valid for isolated individuals. Enter our hero! He turns to Robinson Crusoe, and although he is not completely satisfied with what he finds, he proceeds to quote Defoe extensively in order to illustrate the principles of diminishing marginal utility (Lloyd 1834, 20–24). In contrast to most of his successors who show how marginal utility decreases when the quantity of goods increases, Lloyd tells us how rum, ink, bread, and gunpowder become ever more valuable to Robinson Crusoe as his stores dwindle (i.e., marginal utility increases when the quantity of goods decreases). Thus this proto-neoclassical started the tradition of Robinson Crusoe as a protagonist in the literature of economics.

Not coincidentally, this first appearance of Robinson Crusoe in (neoclassical) economics is also the most unproblematic and uncontroversial one. Even critics of neoclassical economics are ready to accept at least one element of its hard core: the principle of diminishing marginal utility. It is commonsensical and plausible, and there are many examples to illustrate it (including those occurring in *Robinson Crusoe*), so it is hard to see why it should not be an a priori truth, one of the postulates of economic theory that correspond to “simple and undisputable facts of experience” (Robbins 1935, 78).⁹

Most of Lloyd’s successors in the Robinson Crusoe tradition, although they all of them go much further than he in appropriating Robinson Crusoe, begin with what he confined himself to: the principle of diminishing

8. Of course, Gossen (1854) also refers to Robinson Crusoe. But his case is a very special one (see below).

9. Being an economic law, even the principle of diminishing marginal utility is not always and everywhere unexceptionally true. Still, as many cases of behavior not in accordance with it can be dismissed as pathological (“addiction”), it is generally accepted.

marginal utility. We find this principle illustrated in Carl Menger (1871, 96–104), who invents a Robinson story about the way the value of corn and water depends on the available quantity.¹⁰ Eugen von Böhm-Bawerk (1889, 159–61) makes up a similar story about a secluded colonist and the way he values different quantities of corn.¹¹ Knut Wicksell (1893, 22–23) quotes Böhm-Bawerk and uses his Robinson story to make the same point. Likewise, John Bates Clark (1899, 44) also just refers to an abstract isolated individual. On the other hand, William Stanley Jevons (1871, 80), Philip Wicksteed (1888, 58), and Harry Gunnison Brown (1926, pt. 2, 3) all follow Lloyd and invoke Defoe's Robinson Crusoe to explain the principle of diminishing marginal utility. Of course, all authors who make use of Robinson Crusoe in one way or another assume the validity of the principle of diminishing marginal utility for their castaway, even if they do not explicitly state it.

Neoclassical Robinson Crusoe not only needs to obey the principle of diminishing marginal utility; he also, more importantly, needs to be a utility maximizer. In an exchange economy this implies equating the marginal utilities of the different consumer goods (relative to their prices) to one another and, if the consumer has to work for his money, to the marginal disutility of labor (relative to the wage rate).¹² On his island, Robinson has no need for a medium of exchange. He directly compares the utility of consumer goods with the disutility of the labor he needs to expend to procure for himself these goods. Therefore, his utility will be maximal, if he succeeds in working exactly so much and in allocating his labor time thus that the marginal disutility of labor is equal to each of the marginal utilities of the different consumer goods (relative to the labor time necessary to procure them).¹³ It is this reasoning that we find in Wicksell (1893, 23–24) and in Clark (1899, 40–45), with their anonymous island dwellers. Only the former explicitly states the principle of increasing marginal disutility of labor, whereas the exposition of the latter implies that his

10. Carl Menger, having espoused the subjective theory of value and marginal reasoning, is counted among the neoclassicals (see footnote 5). At the same time, he was also one of the founders of Austrian economics, which, due to its aversion to mathematical analysis and its emphasis on disequilibria, soon parted ways with the neoclassical mainstream.

11. Böhm-Bawerk, like Menger a pioneer of Austrian economics, is included here because he was a marginalist and because his capital theory was important for the development of neoclassical capital theory (see footnote 5).

12. This presupposes, of course, that the marginal disutility of labor increases with the length of time spent working.

13. Coincidentally, this is the way Gossen (1854, 4–45) describes utility maximizing behavior: his economic men do not allocate money but time.

protagonist will be working as long as he possibly can. There is the same difference between Wicksteed (1888, 58–61) and Brown (1926, pt. 2, 6–11), who both refer to the original Robinson Crusoe. Wicksteed assumes a given amount of labor time that Robinson Crusoe has to divide between digging roots and gathering rushes; he does not have Robinson also optimize the length of the time he will be working. Brown (1926, pt. 2, 11), on the other hand, includes this aspect:

His [Robinson Crusoe's] different wants will receive satisfaction in the order of and to the extent commensurate with their importance and the ease with which they can be satisfied. The wants remaining unsatisfied will be of progressively less importance in relation to the effort or other sacrifice to an increasing degree. If Crusoe works thirteen hours, he will almost certainly find the thirteenth hour of labor harder than the tenth, eleventh or twelfth. He will choose to work eight, ten, twelve or thirteen hours as the case may be, according to the relation between the utility to him of the goods which the last hour's work produces and the disutility (discomfort or labor sacrifice) of the last hour's work.

Utility maximization also involves decisions about the intertemporal allocation of resources. In this context the phenomena of capital, saving, and interest necessarily appear—even in a primitive economy without capital markets. In particular, even Robinson Crusoe (or any other isolated individual) will optimize intertemporally and thus save and invest according to his rate of time preference and the rates of return of possible investments (Böhm-Bawerk 1889, 398; Clark 1899, 50; Jevons 1871, 212–13; Fisher 1930, 180–81; Marshall 1907, 351). Irving Fisher (1930, 180) is most explicit in pointing that out: “Even when there is no exchange possible, as with Robinson Crusoe alone on his island, there will be dealings with Nature. Crusoe may plant trees or build a boat and balance his immediate labor against his future satisfactions without the presence of any exchange process.” After all, the basic principle is always the same: “Any opportunity to invest simply reduces itself to this: for a time there is more labor or less satisfaction than there would be in the absence of such opportunity, while there is expected later less labor or more satisfaction” (178). Böhm-Bawerk (1889, 108–13) explains this principle with an invented story about Robinson Crusoe (and not about the anonymous colonist he uses in other places). He has him get washed ashore without any tools and fight for survival by gathering fruit. He can only hunt with a bow and arrows, and thus enjoy a richer diet, if he first gathers (and eats) less fruit and uses the labor

time thus saved to make himself these weapons. In this story there is little of explicit optimization. Other authors provide more technical examples. Clark (1899, 48–50) has his isolated individual allocate his labor time between procuring himself food (fish or fruit) and making himself tools (canoes or spades) that will enable him to get the desired food easier. The optimal allocation of time will be determined by the “law of diminishing productivity” of capital. Accordingly, the final hour of labor time devoted to tool making will indirectly get Clark’s islander the same quantity of food as the final hour devoted to gathering fruit or fishing will do in a direct way. Clark’s example is incomplete insofar as he disregards the time it takes for the tools to be made and the delay in consumption this necessitates. Brown (1926, pt. 2, 112–16) paints a more complete picture when he describes Robinson Crusoe’s problem about how much time he should dedicate to “making equipment for his continued existence on the island” (112).¹⁴ To make his equipment he has to forgo at least part of the satisfaction of his immediate wants. “Crusoe must, therefore, decide at what point he no longer cares to make present sacrifices for the larger but larger-to-a-decreasing-degree, future gains” (113). In order to show how the rate of interest is determined, Brown then departs from Defoe and makes up a convoluted and highly unrealistic story (137–45). It involves a second island that is uninhabitable but home to fruit trees that can either be harvested there or transplanted to Crusoe’s island but, in the latter case, have to get their start, as seedlings, on the second island. When the trees are one year old, they yield a harvest of fruit and then die. It all serves to show that if the rate of return of investments is fixed at, say, 10 percent (as in the fruit tree example), then the rate of time preference must conform thereto and the rate of interest can only be 10 percent.

Intertemporal optimization is involved not only in the case of (productive) capital but also in the case of durable consumer goods (or, as Alfred Marshall calls them, consumption capital). Marshall (1907, 350) gives the example of “a man who builds a house for himself on land, and of materials, which nature supplies gratis.”¹⁵ To decide whether, and in what way, to build a house he compares the aggregate of the discounted

14. Although Brown clearly refers to Defoe’s Robinson Crusoe, he feels free to embellish the story with inventions of his own. In particular, he writes that Crusoe “makes himself bow and arrows” (112)—something Defoe’s hero never did.

15. This nameless man may or may not be Robinson Crusoe. In the paragraph immediately preceding the house-building example, Marshall refers to Robinson Crusoe, but in the example itself he does not use this name. In any case, the original Crusoe never built a house but only a small bower some distance away from his principal abode, a cave near the coast (87).

utilities he expects to derive from the finished house with the utility forgone while building the house (i.e., the immediate gratification he might have achieved had he pursued other activities). The man will invest so much labor in building a house that the discounted marginal utility gained by the last hour of labor is equal to the marginal loss of utility due to consumption forgone (351–53).¹⁶

As Böhm-Bawerk (1889, 111) points out, in rare cases the goods saved (i.e., the goods the consumption of which is forgone in the present), the goods invested (i.e., the capital the creation of which is made possible by saving), and the goods consumed (i.e., the goods the consumption of which is made possible in the future because of the investment) may be identical—in particular, corn may be consumed now or may be saved and invested (sown, that is) and consumed later.

The optimality of all conceivable saving and investment decisions may be determined according to the precepts of standard neoclassical capital theory as first formulated by Fisher (1930, 182): “The important point is that the two rates, that of marginal time preference and that of marginal return over cost, must be equal, granted continuity of variation, that is, variation by infinitesimal gradations.” This optimality condition will be fulfilled, as Fisher emphasized on the preceding pages, both by modern businessmen and by isolated individuals like Robinson Crusoe—the only difference being that in the former case the rates mentioned refer to money, whereas in the latter they refer to utility or disutility (180–81).¹⁷

The arrival of Friday on Crusoe’s island affords neoclassical economics with the opportunity to illustrate yet another part of its theoretical picture. Francis Edgeworth (1881, 28–30) uses the purported negotiations between Crusoe and Friday over the terms of a labor contract to contrast the indeterminacy of the outcome of these negotiations with the determinacy of the result of market processes with many subjects both on the supply and the demand side.¹⁸

16. If the efforts necessary for house building and those for procuring other consumer goods are not, as Marshall (1907, 352n1) assumes, equivalent, the calculation of the man would be more complicated still.

17. This reasoning implies that money does not have any real effects—one of the main results of the quantity theory of money as put forward, first, by David Hume (1752, chap. 3) and, then, by Fisher (1911). Therefore, Robinson Crusoe stories are also used, at least implicitly, to show the irrelevance of money for the real economy.

18. Edgeworth (1881, 28) speaks of Friday as “black,” although Defoe goes to great lengths to describe him as “a comely handsome Fellow” with “all the Sweetness and Softness of an European in his Countenance” and without any negroid features (173). It seems to be the fate of classics to be much more often quoted than actually read.

Let us finally turn to Gossen. We reserved this neoclassical pioneer for the last stage of our journey through the history of Robinson Crusoe as *homo economicus*—although he is, after Lloyd, the second author (and the first neoclassical proper) to refer to Robinson Crusoe (1854, 45–46). But his is a very special case. Firstly, he neither quotes Defoe nor invents a Robinson Crusoe story of his own but refers to one of the better-known “second-hand” Robinson Crusoes: Johann Heinrich Campe’s *Robinson der Jüngere (Robinson the Younger)* (1779–80), a German “Robinsonade” written “for the pleasurable and profitable entertainment of children” (as its subtitle announces).¹⁹ This book, which is in the form of a dialogue between an educator and his pupils and which accordingly has a much more didactic and moralistic style than Defoe’s novel, differs in many respects from the latter—of which one is especially interesting: in contrast to Defoe’s hero, Campe’s Robinson is stranded on his island without any tools, weapons, or provisions and has to make do with his hands and what he finds in nature. In the second part of the book he meets Friday and only in the third do they manage to salvage some tools from a shipwreck. Secondly, Gossen does not bother to give examples from Campe (for good reason, as we shall see) but simply exhorts his reader to read Campe’s *Robinson the Younger* or, to be precise, the first part thereof. Thirdly, Gossen does not just refer to Campe in order to find some support for the theories he has presented on the previous pages. He at the same time, quite remarkably, uses these very theories to appreciate the verisimilitude of Campe’s story!

There is hardly a need to mention that the results found here are corresponding most exactly to the experience provided by reality. To be perfectly convinced of that, one ought to read Campe’s narration for the youth, *Robinson Crusoe*, up to where he finds his Friday. You will approve of the actions of this Robinson exactly to the degree in which they conform to the proposition derived above. (Gossen 1854, 45–46; my translation)

This proposition is nothing but the solution to the problem of utility maximization mentioned above: equating the marginal utilities of the goods consumed (relative to the labor expended to obtain them) with one another and with the marginal disutility of labor (4–45). Thus there is a two-way relationship: the part of the novel that conforms to the theory is used to

19. In this book the hero’s last name in Robinson and his first name is Krusoe; besides, he is not from York, England, but from Hamburg, Germany. Curiously, Gossen misquotes the title of Campe’s book: He calls it *Robinson Crusoe* instead of *Robinson the Younger*.

support the theory—and vice versa. Thanks to this stratagem there is no need for him to elaborate on “the experience provided by reality.”

But why did Lloyd, Gossen, and their followers become so infatuated with Robinson Crusoe? Why did—and do—they refer to the famous castaway so often? It is neither chance nor fond memories of their youthful reading that were responsible for this tradition to have got started and continued until today. Rather, Robinson Crusoe was the ideal representative of a basic premise of neoclassical economics—so much so that it was almost inevitable for him to be drafted into its service—the premise that there are universally valid economic laws. From the beginning, neoclassicals were convinced that for economics to become a “real” science, on a par with the natural sciences, especially physics, it had to be based on laws and principles that must not in any way be dependent on historical circumstances or social conditions.²⁰ Not only did they believe, as we have seen above, that the principles of saving and investment are “equally applicable to Robinson Crusoe and to an enterprising capitalist builder of to-day” (Marshall 1907, 351). They thought like that about all economic laws and principles: “The theory of the science consists of those general laws which are so simple in nature, and so deeply grounded in the constitution of man and the outer world, that they remain the same throughout all those ages which are within our consideration” (Jevons 1905, 198). Likewise, Clark (1899, 50–51) speaks of “universal principles” and “universal truths of economic science.” And if these principles and truths are valid for individuals, groups, and societies, for economic behavior past, present, and future, then, of course, the easiest and simplest way to illustrate and expound them is by way of their application to the basic case—the isolated individual whose doings are unhampered by any contingent phenomena. And Robinson Crusoe being the archetypical isolated individual, who had become one of the great myths of Western civilization, he was the inevitable point of reference, the center of argumentative gravity whose attraction proved irresistible for the neoclassicals. Everything that could be shown to apply to him could, according to the basic premise, be assumed to hold in general. Or so the neoclassicals thought.

3. Too Good to Be True

But can Robinson Crusoe really be made out to be the *homo economicus* of neoclassical economics? Can all the stories that were told about him

20. For an account of the “physics envy” of neoclassicals, see Mirowski 1989. For critical discussions of this account, see Blaug 1997, 284–85; and Hoover 1991.

really be true? To answer these questions we have to compare these stories with either their literary model or, in the case of the invented stories, the real world. Our comparisons will be restricted to the Robinson Crusoe stories of the early neoclassicals because the kind of criticism we will put forward is applicable only to them.²¹

Let us first turn to the “literary” Robinson Crusoe stories, and let us begin with the author with whom we ended the previous section: Gossen. If the reader actually complies with his exhortation and reads Campe’s *Robinson the Younger*, he is in for a big surprise: this Robinson is a pietist, a highly religious individual whose actions are guided by prayer and the holy scriptures. There is absolutely nothing about him of the rational, calculating economic man whom Gossen describes.²² At most, one may find evidence here and there that he values goods according to the principle of diminishing marginal utility. Therefore, contrary to Gossen’s intention, his book and Campe’s do not at all support each other; in fact, they directly contradict each other—with disastrous consequences for the credibility and verisimilitude of both. Why Gossen draws any attention at all to *Robinson the Younger* is a mystery: Maybe he never read it himself, maybe he did not expect anyone to read this sanctimonious and stilted book, maybe he willfully misread it and only found what he wanted to find? Be that as it may, this case turns out to be a disaster for the endeavor of neoclassical economics to find support for its theses in Robinson Crusoe.

But, as we pointed out, Gossen’s case is a very special one. Maybe the stories based on the original Robinson Crusoe, on Defoe’s Robinson Crusoe, fare better? Not much, if at all—as even a superficial reading of Defoe’s book will show.²³ The neoclassicals can find support for their

21. The early neoclassicals are not only early in a temporal sense but also in the sense that they held a realist view of economic theory that no longer is current in neoclassical economics. And it is this realist view that makes them vulnerable to the kind of criticism we will put forward in this section. These matters will be discussed in (somewhat) more detail in section 4 below.

22. As the economics of religion has taught us, there need not be a contradiction between any religious (or, for that matter, irreligious) behavior and utility maximization. *Homo economicus* may well be an atheist, a devout Christian, or a devil worshipper. But from the realist point of view of Gossen it is not enough that a utility function can be specified whose maximization describes the behavior of Robinson the Younger. Gossen would have needed an explanation based on utility maximization—which is totally absent in *Robinson the Younger*. This problem does not disappear just because Gossen (1854, 2–3) justified utility maximization as the God-given purpose of human life.

23. In what follows we will take into consideration only Crusoe’s island sojourn. His life before and after will be disregarded, because the neoclassicals were (and are) interested only in his life as a castaway.

theories only to the small extent that Lloyd was claiming. It is obvious that Crusoe complies with the principle of diminishing marginal utility: the more of any good he has, the less he values additional units of this good. So far, so good. But everything, literally everything, else that the successors of Lloyd claimed to have found of supportive evidence for their theories simply is not there. On the contrary, one can find plenty of evidence against the tenets of neoclassical economics. Robinson Crusoe never ever performs the kind of utility maximizing calculations he is supposed to.

Firstly, he does not rationally allocate his time between work and leisure: “But what need I ha’ been concern’d at the Tediousness of any thing I had to do, seeing I had time enough to do it in, nor had I any other Employment if that had been over, at least, that I could foresee, except the ranging the Island to seek for Food, which I did more or less every Day” (57). Contrary to the premises of neoclassical economics, leisure per se has no (or hardly any) value for him, and labor per se does not cause disutility for him. It is true that the neoclassical pioneers did not consider labor as nothing but a bad (see, e.g., Jevons 1871, 165–70). They were aware of the possibility of enjoying one’s work and deriving satisfaction from it. Therefore, the marginal utility of labor did not have to be always negative; it might be positive for part of the time spent working. But for their models to work, it is crucial that the marginal utility of labor be decreasing. Even if positive at the outset, the longer one works, the lower marginal utility becomes until it inexorably reaches zero and turns negative. Clearly, this is not the case with Crusoe. For him, according to the above quotation (and other evidence in the novel), the marginal utility of labor is always positive and constant, and the marginal utility of leisure is always zero (or, if it is positive, constantly below the marginal utility of labor) so that he does not (and cannot) determine his labor time according to marginal calculations of utility and disutility but according to other considerations (on these, see below). If labor time is not determined by way of rational calculation, is at least the time spent on labor divided between the various occupations in a rational way—that is, with a view of the utility one may expect to derive from them? Not at all, as Crusoe makes perfectly clear: “But my Time or Labour was little worth, and so it was as well employ’d one way as another” (59). Indeed, one would be hard put to detect any rational calculation in the way Crusoe divides his time between fishing, hunting, gathering fruit, exploring the island, mending his clothes, and so forth. The absence of any substantial intratemporal optimization implies nonoptimality also for intertemporal decision making. Therefore, it shall come

as no surprise that the way Crusoe goes about saving and investing is certainly not the way the neoclassicals would have him—both in the case of durable consumer goods (such as, e.g., his cave and his fortifications) and of capital goods (such as, e.g., an enclosure for the goats, a spade, or an oven). We see him spend days or even weeks at a time on building a fence, on capturing and taming goats, on making an oven, and so forth—without any regard for the marginal utility derived from the final hour dedicated to these occupations (as against possible alternative uses of this final hour). Part of this behavior is due to the fact that goods cannot be procured incrementally (as neoclassical theory has it) but only in discrete units.²⁴ You cannot capture, tame, and keep half a goat, even if half of the milk one goat gives would be more than enough for you. Another, more important, part is due to the way Crusoe's mind works: he eschews marginal calculation in favor of other decision procedures (see below).

His ignorance of the precepts of neoclassical capital theory becomes particularly clear in the case Böhm-Bawerk (1889, 101) mentions, the case of the identity of the goods to be saved, to be invested, and to be consumed. Here, we have even mathematical evidence for Crusoe's non-neoclassical behavior. It all begins when he accidentally sows a few grains of barley and rice and later discovers to his surprise that some stalks of barley and some stalks of rice grow next to his cave (67–68). He does not use this mini-harvest but experiments with the new grains with the aim of establishing real fields of these cereals. After discovering the proper seasons to sow and an effective method to deter birds from his fields, he is able to provide himself with a regular supply of both barley and rice (89–105). His first real harvest, though, amounts only to half a peck of barley and half a peck of rice (a peck being equivalent to 2 gallons or 9.1 liters), all of which he uses as seed (98). The second harvest yields 2.5 bushels of barley and 2 bushels of rice (1 bushel being equivalent to 4 pecks, i.e., 8 gallons or 36.4 liters). Thus, the rates of return are 2,000 percent (barley) and 1,600 percent (rice). Again, he does not consume anything but reinvests the total harvest. This enables him to harvest 20 bushels of barley and (at least) 20 bushels of rice—implying

24. Neoclassical pioneers, such as Jevons (1871, 57), were of course aware that the assumption of infinite divisibility of goods is unrealistic. But they defended this assumption, which is necessary for the application of calculus, as an unproblematic approximation—which may well be true, if markets are analyzed and the quantity of goods is so large that the actual, discrete variations are so small compared with the total that they can be assumed to be incremental. But in the case of an individual, where the total quantities of goods are small, the assumption of infinite divisibility indeed “may seem absurd” (57).

rates of return of 800 percent (barley) and (at least) 1,000 percent (rice). Then Crusoe resolves to plant this quantity (2.5 bushels of barley and 2 bushels of rice) every year henceforth because thus he will obtain more than enough cereals for him to eat (105), that is, 17.5 bushels of barley (the annual harvest minus the 2.5 bushels used as seed) and 18 bushels of rice (the annual harvest minus the 2 bushels used as seed). Only when the population of Crusoe's island increases does he expand his barley and rice fields—first with the arrival of Friday (179–80) and then with the arrival of Friday's father and a Spaniard (207–8). In the first case Crusoe does not tell us anything exact about this expansion, but in the second case we learn that 22 bushels of barley and 16 jars of rice are now being sown, which yield 220 bushels of barley “and the like in Proportion of Rice” (208)—implying a common rate of return of 1,000 percent.²⁵

Note that the rates of return vary from 2,000 to 800 to 1,000 percent (barley) and from 1,600 to 1,000 percent (rice) as cultivation is increased.²⁶ According to standard neoclassical capital theory as established by Fisher (1930), optimality requires that the rate of return and the rate of time preference be equal. But in the case of his first two harvests Crusoe's rate of time preference must have been zero (because he does not consume anything)—although the rates of return are 2,000 and 1,600 percent, respectively.²⁷ Afterward, with part of the harvest actually being consumed, for Crusoe's decisions to be optimal, his rate of time preference would have to be equal to, first, 800 percent and, then, 1,000 percent (in the case of barley) and to 1,000 percent (in the case of rice).²⁸

25. The jars mentioned here are those Crusoe makes himself from clay (102–3); he does not inform the reader about their capacity.

26. The curious variation of the rate of return of barley cannot be construed as a contradiction to Turgot's law of diminishing returns because not only the quantity of seed but also the area of cultivated land and the quantity of labor were increased (although we do not know in what proportion).

27. We only know the rates of return for the second harvest, but those for the first will probably have been of the same order of magnitude.

28. Note that even if Crusoe's solution to the investment problem were optimal (in the sense of an equality of the rate of return and the rate of time preference), it could hardly have been unique, because the rate of return does not appear to vary according to the usual assumptions of neoclassical capital theory. This is obvious in the case of rice: although the quantity of seed is increased tenfold (from 2 to 20 bushels), the rate of return remains constant. The rate of return for barley varies, but neither in a strictly monotonous way (it first decreases and then increases) nor, probably, continuously. Note furthermore that only Crusoe's rate of time preference has to be taken into consideration: although he is not alone anymore in the last years of his island life, it is he and only he who makes all the decisions.

There is one clear contradiction with the tenets of neoclassical capital theory: in the case of the two first harvests the rate of time preference deviates widely from the rate of return. This contradiction is due to the fact that there is a certain minimum quantity of grains below which consumption simply does not make sense. Although the quantity of grains can be divided (almost) continuously (so that “variation by infinitesimal gradations” as required by Fisher’s theory is possible), it would be absurd to use such a small quantity thereof for consumption that it would be sufficient for, say, only half a loaf of bread. In other words, the marginal utility of cereals is zero until a certain positive quantity is reached. But there are other problems, too. Firstly, in the case of the third harvest (and many of those following) optimality implies different rates of time preference for barley and rice—a phenomenon that is, especially in the case of very similar goods, rather hard to account for from the point of view of neoclassical capital theory. A possible explanation for this apparent divergence might be that Crusoe desires to consume both cereals in (roughly) equal proportions; therefore, he only tries to make sure that the harvest yields are equal and does not really care whether the rates of return are equal to one another and to his rate of time preference (which thus might be uniform, after all). Secondly, Crusoe’s degree of impatience (or his preference for present as against deferred consumption) would have to be extraordinarily high—with rates of time preference of 800 or 1,000 percent. This last phenomenon is an artifact of the contrast between, on the one hand, the actually occurring satiation in consumption and, on the other hand, the assumption of nonsatiation by standard neoclassical theory. Crusoe could easily have planted much more barley and rice, but he does not feel the need for more than he already has: “Upon the whole, I found that the forty bushels of Barley and Rice, was much more than I could consume in a Year” (105). Clearly the twenty-first bushel of barley or the twenty-first bushel of rice would be of zero marginal utility.²⁹ Otherwise, he might have expanded cultivation further and thus have driven down the rate of return until it would have reached an order of magnitude compatible with a reasonable rate of time preference. That Crusoe’s rate of time preference must be “reasonable” and cannot be extremely high can be inferred from, *inter alia*, his attitude toward risk. He obviously is, at

29. There seems to be a free lunch, after all: Robinson Crusoe does not have to make sacrifices to obtain his regular supply of barley and rice. At first, he has so little that he cannot sensibly make use of it; later he has so much that he can easily divert a part of it for replanting. In neither case does he have to abstain from consumption (remember, he puts no value on his labor).

least while on his island, very much risk-averse. For example, he spends much time and energy to construct elaborate fortifications and only leaves his cave heavily armed—although he never ever encounters a dangerous animal and does not find any sign of the presence of other human beings until his fifteenth year on the island (when he comes across the famous footprint on the far coast). Risk aversion does not technically preclude high rates of time preference but makes them highly implausible: after all, possible unfavorable outcomes have to materialize in the future, and if the future is discounted so heavily that it virtually does not matter at all, what sense is there in being risk-averse?

Clearly, Crusoe's agricultural venture is not a good example of neoclassical optimizing in saving and investing—both because the necessary premises (in particular, “well-behaved” utility and production functions) are not fulfilled and because, again, Crusoe obviously follows other, non-marginal decision procedures.

But more than anything else the construction of his first boat shows that Crusoe not only does not calculate rationally but also sometimes does not even reflect upon what he is going to do (107–9). He spends five months of hard labor to fell a tree and make himself a canoe from it, only to discover afterward that his canoe was much too large and much too heavy for him to get it to the sea. “This griev'd me heartily, and now I saw, tho' too late, the Folly of beginning a Work before we count the Cost; and before we judge rightly of our own Strength to go through with it” (109).

Finally, for Edgeworth (1881, 28–30) to speak of negotiations between Crusoe and Friday is absolutely ridiculous. The status of Friday is something between that of a serf and that of a slave.³⁰ He does what he is bid to do and receives what Crusoe sees fit to give him—anything even remotely resembling negotiations is completely inconceivable. Only during their travels after they have left the island does Friday become less of a serf and more of a servant—but even then he would not dream of making demands or questioning Crusoe's authority.³¹

In order to turn Robinson Crusoe into *homo economicus* the neoclassicals not only ascribed a kind of behavior to him that he never showed;

30. Remember that Crusoe does not ask Friday his name when they meet but gives him the name Friday—a clear sign of Crusoe's taking possession of him (174).

31. Having said this, I hasten to add that negotiations between slave and slaveholder are not in general ridiculous. Since a slaveholder cannot completely control the efforts of a slave, it may be necessary to negotiate some sort of incentive in order to prevent shirking. But in the case of Friday, who willingly and wholeheartedly surrendered himself, body and soul, to Robinson Crusoe, this is out of the question.

they also chose to ignore those aspects of his behavior that do not quite fit into their picture. Firstly, and most importantly, Robinson Crusoe is not—even while alone on his island—the completely isolated individual he is represented to be. Or, rather, although he may be isolated, he is not asocial. As Bastiat (1851, 79) points out, he is still a social being—in the sense that, on the one hand, he lived among other men until his twenty-seventh birthday (the day of his shipwreck), has acquired language, has learned and has been taught one thing or another, and has been socialized in other ways, and, on the other hand, he has been able to provide himself with tools, arms, books, and so forth. from the shipwreck, all of them products of society. His knowledge and experience are never mentioned by the neoclassicals and the salvaged items are mostly neglected or expressly abstracted from—although Robinson Crusoe could not have survived the way he did without either.³² He himself acknowledges the value of his education and his experience—albeit only implicitly (e.g., 59, 84, 111–12)—and paints a vivid picture of what would have become of him without the things from the ship:

I spent whole Hours, I may say whole Days, in representing to my self in the most lively Colours, how I must have acted, if I had got nothing out of the Ship. How I could not have so much as got any Food, except Fish and Turtles; and that as it was long before I found any of them, I must have perish'd first. That should I have lived, if I had not perish'd, like a meer Savage. That if I had kill'd a Goat, or a Fowl, by any Contrivance, I had no way to flea or open them, or part the Flesh from the Skin, and the Bowels, or to cut it up; but must gnaw it with my Teeth, and pull it with my Claws like a Beast. (111)

Therefore, he clearly recognizes that even an isolated individual depends on society in one way or another to be able to live as a human being. And, needless to say, he does not like being alone on his island. What he misses most, what he yearns for most intensely, is human company (e.g., 97, 132), and, significantly, he thinks the year after the arrival of Friday “the pleasantest Year of all the Life” he hitherto spent on the island (180).

Secondly, he organizes his life with the help of rules: “I began to order my times of Work, of going out with my Gun, time of Sleep, and time of Diversion” (62). In the morning he goes hunting and works (e.g., he cooks, preserves food, mends clothes, or builds tools); in the middle of the day he

32. That is why the plot of Campe's *Robinson the Younger*, whose hero has to make do without anything, strains the credulity of the reader so much.

rests; and in the afternoon he continues to work; three times a day he reads the Bible and prays (97–98). Every seventh day he does not work at all but celebrates the Sabbath (55). This division of his time is not dictated by calculations on how best to use each and every minute but, in the first place, by a desire for regularity and order. What this order looks like is determined to a considerable extent by the conditions of his environment (in particular, the changes of temperature during the day that make rest during the midday heat imperative). Furthermore, his religious activities are a self-imposed obligation that he thinks to be his duty toward God. He also seems to be influenced very much by convention. Although he is perfectly aware that money is of no use to him on his island, he is unable to leave behind the silver and gold coins he finds in the wreck of the ship (50).³³

Thirdly, Robinson Crusoe not only differs from *homo economicus*, who tries to realize given ends with the help of given means in an optimal way, in that he does not seem to be optimizing but also in that neither his ends nor his means appear to be given. Let us first turn to the former: Crusoe often reflects upon his life, the direction it has taken, and the choices he has made. He reproaches himself for not having followed the advice of his father, for not having adopted the steady and quiet life that was suggested to him: “I rejected the Voice of Providence, which had mercifully put me in a Posture or Station of Life, wherein I might have been happy and easy; but I would neither see it my self, or learn to know the Blessing of it from my Parents” (78). Instead of settling down and leading a peaceful, well-ordered life, he let his penchant for adventure and travel overwhelm him and launch him on a career as sailor, slave trader, and plantation owner. This is what he comes to regard as his original sin, for which the shipwreck was God’s just punishment (Novak 1976, chap. 2). Following Amartya Sen (1977), we may say that Crusoe has metapreferences to the effect that he wishes he had not had the actual preferences he formerly acted upon. Of course, *homo economicus* never questions his preferences.³⁴ As to the given means, we cannot help but notice that Crusoe is the last man to be content with

33. Crusoe may have been motivated not only by convention (i.e., his being socialized to value money highly) but also by his hope of eventually being able to return to civilization and to make use of the coins he took away. If so, he never admits to this hope and always refers very disparagingly to the money (“the nasty sorry useless Stuff” [110]). Ian Watt (1951, 116) interprets these passages as an example of the possible conflict between conventions and one’s real needs.

34. That does *not* mean that in neoclassical economics preferences (or tastes) always are immutably fixed. Indeed, the recourse to a change of preferences is, as we shall see (section 4), an effective defense against problematic empirical evidence. The point here is not that the preferences of *homo economicus* never change but that he himself never reflects upon them or changes them: changes of preferences are always exogenous.

what he has at his disposal. In fact, he is the paragon of inventiveness and ingenuity. Constantly he is looking for ways to improve his life, for new sources of food, for new defenses to protect himself and his possessions, for new means of transport, for new tools to make his labor easier—so much so that he finally succeeds in creating a microcosm of Western civilization on his island. Better than any other hero, he embodies human achievement and enterprise. For him work and invention are quasi-religious obligations, which is why to him labor as such is not a bad and leisure as such is not a good—quite the contrary (Watt 1951, 104–5). There is, by the way, no contradiction between this attitude and his conception of his island life as divine punishment. Although he does prefer work and activity to sloth and leisure, he most certainly would not have chosen hard manual labor on a deserted island as the way to exercise his entrepreneurial spirit.

All in all, Robinson Crusoe does not resemble *homo economicus* in the least. But he does resemble the economic men that populate the writings of certain rival schools of thought. Indeed, is not the behavior of Crusoe, with its emphasis on rules, conventions, and duty, typical for the post-Keynesian theory of choice? And is he, with all his creativity and all his inventiveness, not an excellent example of the entrepreneur of Austrian economics?³⁵ Come to think of it: all the time when everybody believed him to be a partisan of neoclassical economics, he really was in the camp of its opponents.³⁶ A nice case of poetic justice, if ever there was one in the history of economics.

35. Post-Keynesianism being a notoriously heterogeneous school of thought, there is no single theory of choice to which each and every post-Keynesian subscribes. Nonetheless, there are enough common features to justify speaking of a post-Keynesian theory of choice. In particular, the irreducible uncertainty of the environment and the cognitive limitations of the human mind are generally acknowledged and emphasized. From these basic premises the necessity of procedural rationality is deduced, a rationality that is characterized by the reliance upon rules, habits, conventions, traditions, and other heuristics—as opposed to the substantial rationality of neoclassical optimization (see, e.g., Earl 1983, 2005; and Harvey 1998). (Neo-) Austrians advocate a similar theory of choice (see, e.g., O’Driscoll and Rizzo 1985). After all, only in the presence of “structural” uncertainty is there a role for genuine entrepreneurship, one of the central concepts of Austrian economic theory. Already Menger paid some attention to entrepreneurship, but it was Joseph Schumpeter (1912) who made the creative, inventive entrepreneur the hero of Austrian economics. Both market processes and economic development are largely driven by entrepreneurs, who are constantly striving to discover hitherto unexploited opportunities for profit and, even more importantly, to imagine and create new sources of profit and wealth (see, e.g., Kirzner 1979, 1989). The contrast to the neoclassical “entrepreneur,” who is merely maximizing a given profit function, could not be greater.

36. To the best of my knowledge neither the Austrians nor the post-Keynesians turned the Robinson Crusoe tale on the neoclassicals. Maybe because there was (and is) enough real-world evidence with which to make their point?

But, of course, that does not mean that the neoclassicals are wrong and the Austrians and the post-Keynesians are right—because, after all, Robinson Crusoe is a fictitious person. The neoclassicals may be guilty of misrepresenting Robinson Crusoe, but they still can be vindicated, if it turns out that isolated individuals really behave the way they do in the neoclassicals' invented and pseudo-original Robinson Crusoe stories. The reports we have about shipwrecked or marooned sailors, however, show that they were very far from re-creating European civilization *en miniature*. Instead they were leading very desperate and miserable lives (Novak 1976, 52; Watt 1951, 107; Weaver-Hightower 2007, 135–36; White 1982, 138). Constantly threatened by starvation, disease, and wild animals, they were living in permanent fear and suffering from deprivation of every kind conceivable—leading to their degeneration into beings little better than beasts. They often forgot the use of language or fell into madness and died an early death. For example, Alexander Selkirk (1676–1721), the Scottish sailor whose life is thought to have provided the inspiration for Robinson Crusoe, had relapsed after (only) four years and four months on a Pacific Ocean island “into a sort of savage state” (Scott 1972, 77).³⁷ And there are other examples: a contemporary report describes the rescue by the Dutch of a French sailor who, at the beginning of the seventeenth century, spent twenty months as a castaway on the Indian Ocean island of Mauritius: “He was stark naked, in regard that having been in a burning Feaver, which heightened into a degree of madness, he had torn his clothes; so that having not had any thing about him ever since his sickness, nor fed on any thing but the raw Tortoyse he took, they [i.e., the Dutch] were not a little surpriz'd at the sight of him” (Olearius 1669, 199). Only extraordinarily lucky circumstances—and his extraordinary personality—saved Robinson Crusoe from such a dire fate, as he himself is perfectly aware of. Obviously, his fantasy about what would have happened to him without the things from the ship (see above) was much closer to the truth than the stories of the neoclassicals whose isolated individuals never have existed and never could have existed.

Therefore, neither in the literary nor in the real world are we able to find any evidence to support the Robinson Crusoe stories of neoclassical economics. They are simply not true.

4. But Does It Matter at All?

So, the neoclassical economists either misrepresented the original Robinson Crusoe (or, in one case, a secondhand Robinson Crusoe) or made up

37. See also chapter 6 of the biography of Selkirk by Rodolphe Louis Mégroz (1939).

stories about isolated individuals that have no parallels in the real world. Why should anybody care, anyhow?

To answer this question it is necessary to discuss, on the one hand, the *functions* of Robinson Crusoe stories in neoclassical economic theory and, on the other, the *purposes* of this theory.³⁸ Now, what might be the functions of the Robinson Crusoe stories? Possibly, they might be used to justify the theory in whose context they appear. But there is only one author who explicitly appeals to Robinson Crusoe for a justification of his theory: Gossen. Does that mean that all the other Robinson Crusoe stories are mere rhetoric, just illustrations that might as well have been omitted or replaced by any others? Not quite. To see why not, it will be helpful to consider this question from the point of view of Mary Morgan (2001) and her conception of economic models.³⁹ For her, an economic model consists not only of its formal structure (often expressed in mathematical relations) but also of the “story” that is necessary to understand the model and to answer questions not only about the hypothetical world of the model but also about the real world.⁴⁰

Models are mixed instruments. In model-based story telling, the relationships between the elements of the models are covered by the economic theories and incorporate the logic of whatever mathematics they are expressed in. But where to start the tale, which questions are interesting and relevant, and even the order of solving the model is somewhat open—the user has to make sensible choices in order to tell meaningful stories, stories which are plausible and interesting about the world. (378)

Of course, the Robinson Crusoe stories are irrelevant to the problems of real economies—like unemployment, income distribution, or financial stability (Katouzian 1980, 159–60). They do not tell anything “plausible and interesting about the world.” For that purpose, stories are needed that ask “why” or “what happens if” questions about the *real* world. Typically, the neoclassical authors we discussed in sections 2 and 3 tell *both* kinds of story. First, a (verbal) model is developed with the help of a Robinson

38. In what follows, important methodological issues will be brought up—issues that, in the context of the present article, cannot be dealt with exhaustively. Students of methodology are asked to make the necessary allowances.

39. I am grateful to Kevin D. Hoover for pointing out Mary Morgan’s 2001 article to me.

40. With stories being integral parts of models, it no longer is possible to distinguish clearly between models and theories (as, e.g., Daniel Hausman [1992, chap. 5] does). Therefore, I shall use the terms *model* and *theory* synonymously.

Crusoe story; then the lessons from this model are applied to the real world by way of a second story that is supposed to provide insights into and answers to interesting and relevant economic problems. For example, Brown (1926, pt. 2, chap. 1) presents his theory of value as a theory of value of Robinson Crusoe (secs. 1 and 2) and afterward applies it to a “modern community” (sec. 3). The same goes for Marshall (1907, bk. 5, chap. 4), who uses a Robinson Crusoe story to expound his theory of capital and interest and then proceeds to discuss the investment decisions of “the modern undertaker of business enterprises” (353).

Curiously, the tasks to be fulfilled by one single story—understanding the structure of the model *and* learning something about the real world—are allocated to two different stories: the Robinson Crusoe story and the real-world story.⁴¹ In a way, this was all but inevitable, since, as we have argued (see the end of section 2 above), Robinson Crusoe was an almost ideal vehicle for the theoretical content the neoclassicals intended to convey while they, of course, also had to say something about the real world. Therefore, far from being merely an unimportant illustration, the Robinson Crusoe story is an integral part of many neoclassical models.

But if so, does it make sense to criticize these stories from a point of view outside the models they belong to—by confronting them with the adventures of the original Robinson Crusoe and real-world castaways (as we did in section 3)? The answer to this question depends on the purposes of the respective theories or models. Basically, there are two positions. Realists, on the one hand, not only try to describe and predict the phenomena they investigate but also seek to explain them; they want to discover new truths about the world. Instrumentalists, on the other hand, are more modest. Skeptical about the possibility of making claims about unobservable facts, they see their theories only as instruments to arrive at descriptions and predictions (see, e.g., Hausman 1992, 285–88).⁴²

41. This phenomenon is *not* due to the fact that most of the early neoclassical models had a verbal (as opposed to a mathematical) structure. When Robinson Crusoe makes his appearance in modern neoclassical texts, we encounter the same pattern. For example, Varian (2010, chap. 32) explains and exemplifies his model of production with the help of a (unauthentic) Robinson Crusoe story before he tells us about the “useful insights” (Varian 2010, 627) to be gained from his model for understanding the real economy. There is one difference, however: in mathematically structured models a clear distinction is possible between model structure and model story, which often is difficult in the case of verbal models.

42. For our purposes, the traditional conception of three separate goals of science—description, prediction, and explanation (see, e.g., Hausman 1992, 77)—is accepted. Note, however, that this conception is not uncontroversial (e.g., Mark Blaug [1992, 10] doubts whether explanation without prediction is at all possible). Note, furthermore, that of both realism and instrumentalism there are different versions (see, e.g., Mäki 1989, 1998a, 1998b).

Neoclassical economists' understanding about the central element of their theory, utility theory as embodied by rational economic man, underwent a remarkable change around the middle of the last century—a change that was mirrored by the change in the way Robinson Crusoe has been used in neoclassical economics.

As first put forward, utility theory was clearly meant to fulfill the descriptive, the explanatory, and the predictive function. In particular, at least up to (and including) Fisher the neoclassicals intended to *explain* behavior with their model of *homo economicus*. There are countless instances in the literature about decisions being made or alternatives being chosen *because* they maximize utility. Only later, when the hypothesis of conscious and intentional utility maximization ran into more and more difficulties and became more and more incompatible with what we know about psychology and human behavior, did the neoclassicals beat a retreat and abandoned their claim to explain behavior. Today, utility theory is applied only in an as-if way. Behavior is described *as if* people had a utility function they were trying to maximize. Accordingly, cardinal utility, with its untenable psychological implications, could be replaced by ordinal utility, which makes much less problematic assumptions; and the principle of diminishing marginal rates of substitution was substituted for the principle of diminishing marginal utility.⁴³ Utility theory became a way of describing choices based on (consistent) preferences; it was no longer a (subjective) theory of value but became a theory of choice. Realism gave way to instrumentalism, and the focus shifted from explanation to description and prediction. This was true not only of utility theory but also of other economic theories, such as the theory of the firm, with its postulate of profit maximization. In the context of the present article, however, it is only utility theory that matters.

This methodological change is best epitomized by Milton Friedman's famous 1953 paper, which is still, and despite all the criticism that has been heaped upon it, the single most influential piece of economic methodology, and its precepts continue to be followed by most mainstream economists (Blaug 1992, 110–11). For Friedman (1953, 7), the sole criterion for the quality of a theory is its ability to make “valid and meaningful . . . predic-

43. The as-if approach does not require the replacement of cardinal by ordinal utility; the former is simply not necessary anymore. Cardinal utility survives only in expected utility theory, a normative theory of decision making under risk and uncertainty.

tions"; all aspirations to explain the causes of the phenomena observed and predicted are abandoned.⁴⁴

In the case of the theory of choice, prediction in a meaningful way depends on the stability of preferences. Only if preferences are stable (i.e., only if a stable utility function exists) can meaningful predictions be derived from the postulate of utility maximization, predictions that are, at least in principle, falsifiable (Blaug 1997, 338–39). But, having suffered from the attacks of psychologists once, the neoclassicals were careful not to specify for how long preferences may be assumed to be stable. Instead, they refer to the “short run,” which is understood to last as long as preferences are stable (and vice versa). Therefore, should predictions based on the model of rational economic man run afoul of reality, the model can always be saved.⁴⁵ If individuals do not behave as they are predicted to, it is because they have changed their minds, not because they do not follow the precepts of the neoclassical theory of choice—which is thus made immune against any falsification.⁴⁶ But this immunization comes at a price: it involves the surrender not only of explanation but also of prediction. For predictions do not make much sense if you cannot ascertain in advance whether prediction will be possible and reliable but only after the predicted events have (or have not) occurred. In fact, we are left with description only—a watered-down version of instrumentalism one might call descriptivism (Blaug 1992, 98).

This development can be retraced in the history of the treatment of Robinson Crusoe in neoclassical economics. The neoclassicals whose Robinson Crusoe stories we described in section 2 were realists. They did not intend their stories as mere illustrations of the consequences of their theories but clearly tried to justify and confirm them by not only describing but also explaining the purported behavior of Robinson Crusoe with the help of these theories. Therefore, one may assume that they would have been embarrassed, had the inconsistencies and contradictions of their Robinson Crusoe stories with both the literary model (or models, if we take Campe into account, too) and the real world been pointed out to

44. Because of its emphasis on prediction, Friedman’s brand of instrumentalism might also be called predictivism.

45. In practice, an unspecified *ceteris paribus* clause is all it takes to refute any criticism.

46. George Stigler and Gary Becker (1977) tried to exorcize the recourse to changes of preferences or tastes by postulating fixed preferences. Thus they wanted to make sure that their predictions were actually falsifiable. However, in the end, they merely replaced one kind of ad hocery with others and so still ended up with predictions that were untestable or irrefutable.

them.⁴⁷ Their latter-day brethren would not have any qualms. Modern neoclassicals (like, e.g., Hal Varian [1992, 2010])—in accordance with their more restricted conception of utility theory—refer to Robinson Crusoe not to explain his behavior but only to describe it in terms of neoclassical economics. Their Robinson Crusoe stories simply are to illustrate the consequences and implications of their theories for the case of an isolated individual. Therefore, any realist criticism is incompatible with their instrumentalist (or even descriptivist) theory of choice. Had the early neoclassicals subscribed to the same methodology, they could have easily defended themselves and their Robinson Crusoe stories: after all, each and every behavior can easily be reconciled with the model of rational economic man, if it no longer has to explain anything, if preferences are allowed to change at any time, and if, furthermore, information or decision costs can be introduced ad hoc.⁴⁸ The utility function then can be adapted to (or complemented according to) the behavior observed, which makes all the problems in the Robinson Crusoe stories disappear. Different rates of time preference? Preferences have changed. A duty to read the Bible and pray? Fulfilling this duty induces a “warm glow” and thus maximizes utility. Rules that are being followed? This is merely a way to save on decision costs, that is, to maximize a more complete utility function. Even the most egregious example of Robinson Crusoe’s nonrationality—his building the first, unmanageable boat—can be described as maximizing utility in some strange way. And of course also Campe’s *Robinson the Younger* and the real-world castaways can be conceived of as *homines economici*.

But the fact that the “predictions” of modern choice theory cannot be falsified does not mean that this approach cannot be criticized—quite the contrary. One might well ask what is gained by describing human behavior in terms of utility maximizing calculus (except formal elegance and mathematical rigor, that is)—and what is lost: after all, the way we choose to describe behavior is not completely innocuous or irrelevant. Describing human behavior from the point of view of *homo economicus* leads to an emphasis on certain facets of human behavior while others are neglected

47. I am not aware of any contemporary criticism along the lines presented above. Maybe the detractors of neoclassical economics among the economists did not know or did not care about the details of Defoe’s novel and the literati did not condescend to even take notice of, much less to discuss or criticize, the arguments of, as Carlyle had it, the “dismal science” or the “pig philosophy.”

48. One of the first to make this point was Terence Hutchison (1938); he was followed by many others (see, e.g., Sen 1977, 322–23; and Shoemaker 1991, 207, 211).

or even disregarded. Especially historical, cultural, and social influences can hardly be accommodated properly.

This is not the place to enter into a discussion of the value and the validity of the neoclassical research program. Nonetheless I will venture some remarks about the role our friend Robinson Crusoe might play in such a discussion. Two points, in particular, deserve some attention. First of all, because of the interdependence of model structure and model story, Robinson Crusoe is more than just a (more or less) arbitrary representative of neoclassical economic man. They are closely related—especially insofar as both are isolated. Robinson Crusoe is isolated by the sea, and this fact makes his asocial utility function seem acceptable, even inevitable. But *homo economicus* is equipped with the same sort of utility function that effectively isolates him from his fellow *homines economici* among whom he lives. In a way, every man in neoclassical economics lives on an island of his own.⁴⁹ Therefore, in this sense, we might say that *homo economicus* is in fact Robinson Crusoe. But as any meaningful economic activity completely outside society “is an absurdity on a par with the development of language without individuals living together and speaking together” (Marx 1974, 6; my translation), it seems highly doubtful whether any lessons about real economies can be learned from the Robinson Crusoe models. In these models, the step from the first story (the Robinson Crusoe story proper, which explains and illustrates the model structure) to the second story (which is supposed to tell us something about the real world) is not at all unproblematic. Thus, since the Robinson Crusoe stories are irrelevant for real economies, the relevance of neoclassical economics for real-world economic problems may be compromised by its dependence upon the isolated-individual paradigm.

Besides, from a realist point of view, the Robinson Crusoe stories themselves do not make much sense, as we have seen in section 3. Even in the case of the isolated individual, the most favorable one for neoclassical economics, the model of *homo economicus* failed to explain (and predict) the behavior of literary and real castaways. One might well wonder whether the abandonment of realism really represented a “progressive” (in the sense of Lakatos) answer to this problem and similar failures of the realist approach.

49. Needless to say, this metaphor refers only to the fact that, however the preferences of *homo economicus* may come about, they are formed not in a social context but independently and in isolation from others.

To answer, finally, the question of the title of this section: yes, it does matter. Exactly *because* it is true “that economic science has . . . very little to learn from the study of the household of an isolated person” (Cassel 1925, 27), we may learn a lot about the development of neo-classical economics from the fate Robinson Crusoe has suffered in its service.

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