

DOI: 10.19195/2084-4093.24.2.1

Igor Wysocki

ORCID: 0000-0002-4926-4010

Independent Scholar

igorwysocki82@wp.pl

Walter E. Block

ORCID: 0000-0003-2215-4791

Harold E. Wirth Eminent Scholar Endowed Chair and Professor of Economics

Loyola University New Orleans

wblock@loyno.edu

The Giffen good — a praxeological approach*

Date of submission: 6th of August 2017; **date of acceptance:** 28th of February 2018

JEL Classification: A10

Keywords: Giffen good, demand curve, praxeology

Abstract

The Giffen good — a praxeological approach

In the present paper, we argue that the shape of any respectable demand curve must be monotonic (non-increasing). By doing so, we follow the footsteps of Murray Rothbard, who regarded the demand curve as derived from the law of diminishing marginal utility. However, our caveat is that the horizontal axis must represent the units of the same economic good. Equipped with the notion of the same economic good, we also argue that Giffen or Veblen goods do not pose any real problem for analysis. Rather, they behave as any other good — that is the demand curve for them is also (and necessarily) downward sloping.

* We thank the referee of this journal for making many and important suggestions for improving an earlier version of this paper. But the usual stipulations apply: we alone are responsible for any remaining errors of commission or omission.

Introduction

There is a tendency amongst neoclassical economists of the logical positivist persuasion to reject all economic laws. For them, there are only tentative hypotheses. If there are any laws at all, in this view, they are tentative at best, and, typically, there are exceptions to them all.

If there is any candidate in the dismal science for a law, not a hypothesis, it is the law of demand: demand curves slope in a downward direction. From a praxeological point of view, there are and can be no exceptions. However, the Giffen good¹ is exhibit “A” in the neoclassical case against Austrian economics. Here, it is claimed, there is an exception to the law of downward sloping demand. Yes, as readily admitted, most demand curves slope in a downward direction. Certainly, there is a general tendency for this to occur. But it is only an empirical generalization, in their view.

The present paper is dedicated to defending the Austrian perspective that demand curves slope negatively from left to right, and that this is a matter of praxeology, from where there can be no exceptions. In section II we ask if the downward sloping shape of the demand curve is a necessity or a contingency. Section III is devoted to an analysis of the considerations that would effectively guarantee that the demand curve is downward sloping. Section IV deals with the concept of the same unit. Section V derives the demand curve from the law of diminishing marginal utility. In section VI we apply our apparatus to show why Giffen goods do not amount to a counterexample to the usual (downward sloping) shape of the demand curve. We conclude in section VII.

Is the downward sloping shape of the demand curve a necessity or contingency?

Hereby, we will try to improve on the notion of the demand curve and put it firmly in the Austrian deductive edifice. First, before radicalizing our views, let us look at Block’s and Barnett’s position on the subject.

To let the cat out of the bag preliminarily, it is our contention that the quagmires, seeming contradictions, puzzles, objections to Austrian theory arise because of insufficient attention paid to the distinction between praxeology and thymology, and can be resolved to a renewed focus on this distinction. To wit: the law of demand, contradicted by the Giffen good case, is thymological, not praxeological, and thus fails to constitute a refutation of Austrianism; in contrast, the law of dimin-

¹ There is a vast neoclassical literature on Giffen behavior. For some of the most illustrious examples; see: Abramsky 2005; Baruch & Kanai 2001; Battalio, Kagel, & Kogut 1991; Doi, Iwasa & Shimomura 2009; Hicks 1956; Koenker 1997; Jensen & Miller 2008; Moffatt 2002; Nachbar 1998; and Stigler 1947. However, any alleged empirical evidence for Giffen behavior cannot refute the point we are making in the present paper. It is because we construe of the same good in such a manner that any demand curves (Giffen and Veblen goods inclusive) are necessarily non-decreasing.

ishing marginal utility, as separate and distinct from the law of downward sloping demand, although not unrelated to it, is indeed a praxeological claim. (Block & Barnett 2012, p. 5)

The distinction between thymology and praxeology being, of course, still valid, we suggest now to delineate the domains of the two slightly differently. That is, we posit that the demand curve is necessarily downward sloping and that this determination is of a praxeological nature. The provisos that are going to serve the purpose of demonstrating this are a specific understanding of the notion of the same good (addressed later in the present paper) and correctly conceiving of *a unit of a good*. The latter has a bearing on the former because if we put a physical good on the horizontal axis, as is often unreflexively done, what we are going to end up with would be distinct economic goods. In other words, in a given collection of the same physical goods there may be ‘stuck’ many *different* economic goods. That is why defining a *relevant unit* is of utmost importance to arrive at a proper concept of the same economic good, and this in turn to finally derive the necessarily downward sloping demand curve. Therefore, to clear up misconceptions and to start gradually approximating the demand curve, we shall now turn our attention to the concept of *a relevant unit* of the same supply.

What can guarantee the downward sloping demand curve — the notions of the same (economic) good and of a relevant unit of the same good?

In the next two sections we are going to conceive of the law of demand in purely praxeological terms. The provisos that are going to serve the purpose of demonstrating that the demand curve is necessarily downward sloping are two-fold:

1. a specific understanding of *the notion of the same good*² (addressed later in the present paper) and
2. correctly conceiving of *a unit of a good*.

The latter has a bearing on the former because if we place a physical good on the horizontal axis, we may end with two or more distinct economic goods stacked on the same axis. Certainly, that would not necessarily ensure the downward sloping demand curve. Just to give a word of warning, since even two units of the same *physical good* can satisfy some additional end of a given actor that a single *physical good* of the same type cannot, this means that these two units put together constitute a different (economic) good than those two units taken separately. To give but one example,³ if two sips of beer can make a given eco-

² Or the same economic good. As we argue elsewhere, economic goods are but a subset of goods. The *differentia specifice* of economic goods is that all the tokens in any given type of economic goods are of positive utility. In other words, these tokens are scarce relative to human needs.

³ This example is discussed at length in Wysocki & Block 2018.

conomic actor drunk, whereas one sip can make him only tipsy, the division of the said (economic) goods into the *same (economic) goods* using the criterion of their physical identity would be utterly wrong.⁴ It is our contention that only the *same (economic) goods* can satisfy the same range of an actor's ends. Conspicuously enough, what two sips of beer can achieve a single sip cannot. So, when we have a 'supply' of two sips of beer, we have at our disposal two types of economic goods: two single sips of beer or a set comprised of two sips. So, any single sip would fall into one equivalence class and the amalgamation of two sips would fall into an altogether different one, despite their physical identity. After this brief exposition, so as to clear up misconceptions and to start gradually approximating the demand curve, we now turn our attention to the concept of *a relevant unit* of the same supply.

What counts as a unit of the same supply?

We cannot commence this section any better than to quote Rothbard's insightful comment on how to define a unit of a supply:

For example, it is erroneous to argue as follows: Eggs are the good in question. It is possible that a man needs four eggs to bake a cake. In that case, the second egg may be used for a less urgent use than the first egg, and the third egg for a less urgent use than the second. However, since the fourth egg allows a cake to be produced that would not otherwise be available, the marginal utility of the fourth egg is greater than that of the third egg. This argument neglects the fact that a "good" is not the physical material, but any material whatever of which the units will constitute an equally serviceable supply. Since the fourth egg is not equally serviceable and interchangeable with the first egg, the two eggs are not units of the same supply, and therefore the law of marginal utility does not apply to this case at all. To treat eggs in this case as homogeneous units of one good, it would be necessary to consider *each set of four eggs* as a unit. (Rothbard 2004 [1962], pp. 73–74)

As Wysocki and Block argued, the precise definition of *a unit of the same supply* is vital because only this can allow us to arrive at a proper concept of *the same economic good*. For *the same economic good* assumes the notion of a unit; after all, it is *these units* that are homogeneous with each other; or, in other words, it is *sameness* that holds between *the units of* an economic good.

It is Rothbard's (as well as our) point that *units of the same supply* do not coincide with physical goods. Let us scrutinize Rothbard's remark more closely and let us note what insuperable difficulties we would face were we to fail to distinguish between the same physical good and the same economic good.

Let us imagine how the demand curve would look for Rothbardian eggs. It is assumed that the fourth egg is of greater utility than any single egg acquired before, only because due to four eggs put together can the economic actor satisfy ends no smaller supply of eggs could. So, it seems that utility falls down across

⁴ Of course, chemically, the beer from the first and second glass would be indistinguishable. But we are talking economics, not chemistry, here.

the first three eggs and then suddenly rises with the fourth one. Does that invalidate the law of diminishing marginal utility? Of course not. This is what Rothbard avers and we concur. So, if we place the same physical good on the horizontal axis, the demand curve would be downward sloping in some range and upward pointing in another. In our case, the transition from the third egg to the fourth one constitutes such a peak upward. Instead, what we suggest, following Rothbard, is to distinguish between economic good 1 — single eggs, and economic good 2 — successive collections of four eggs. In the view of Wysocki and Block,

whenever there is a collection of physically identical units and there is such a number of n units that the n th unit, after $n-1$ units were already put to use, yields such an over-and-above service that any $n-1, n-2, \dots, 1$ collection of those is unable to render, then the marginal unit should be defined as an n -element collection of physically homogenous items. (Wysocki & Block 2018)

Obviously, the above quote should be supplemented with a note to the effect that the said collection of n eggs translates into at least two distinct economic goods. Each single apple *does* satisfy some range of needs. Therefore, each single apple would fall into the same equivalence class.⁵ But, a collection of four apples would fall into a different equivalence class. Therefore, these two would effectively be different economic goods. Therefore, stacking them on the same scale and treating them as identical only because they are physically the same is therefore a category mistake and it is no wonder that the demand curve in this case would cease to be monotonic. However, our position precisely predicts that the demand curve is strictly monotonic (non-increasing in this case) for it is true that the utility of successive *single apples* diminishes (the single apples constituting one economic good) and the same applies to the successive collections of four apples (the other economic good considered in Rothbard's example). After the conceptual stage has been set, let us proceed to demonstrate why we consider the demand curve to be but a reflection of the law of diminishing marginal utility, which will finally equip us with all the instruments necessary to tackle the issue of Giffen and Veblen goods.

Deriving the demand curve from the law of diminishing marginal utility

The first issue that should be dealt with when we are going to derive the individual demand curve from the law of diminishing marginal utility is to how to relate the respective axes to each other in the demand curve and in the utility function (utility here being a function of the marginal unit). Let us briefly recall that the

⁵ The universe of economic goods can be divided into distinct equivalence classes when we order this space by the relations of *sameness*, *sameness* being an equivalence relation since it is a) reflexive, b) symmetrical, and c) transitive. The emergent classes would be non-overlapping and exhaustive of the original space (see Wysocki & Block 2018).

demand curve normally represents *the relation* between the price of a good and its quantity. In other words, on the horizontal axis we place the absolute number of the units of a good, and on the vertical axis, appear alternative prices. Normally, the lower the price, the bigger the quantity we are willing to buy and *vice versa*. This can be represented graphically as follows in figure 1:

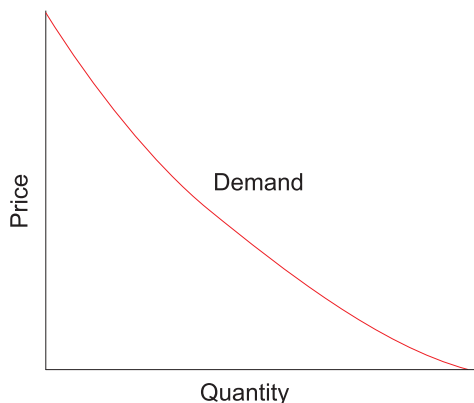


Figure 1. Demand curve

Source: own work.

The law of diminishing marginal utility, on the other hand, shows the relation between a marginal unit and its utility. As formulated by Hoppe:

whenever the supply of a good increases by one additional unit, provided each unit is regarded as of equal serviceability by a person, the value attached to this unit must decrease. For this additional unit can only be employed as a means for the attainment of a goal that is considered less valuable than the least-valued goal satisfied by a unit of such good if the supply were one unit shorter. (Hoppe 1995, p. 14)

Below, we cite Rothbard's figure representing the law of diminishing marginal utility, in keeping with the praxeological insight insofar as it makes no use of utils; instead it conceives of utility purely ordinally (here utility necessarily diminishes as the ends are ranked lower and lower for successive units respectively):

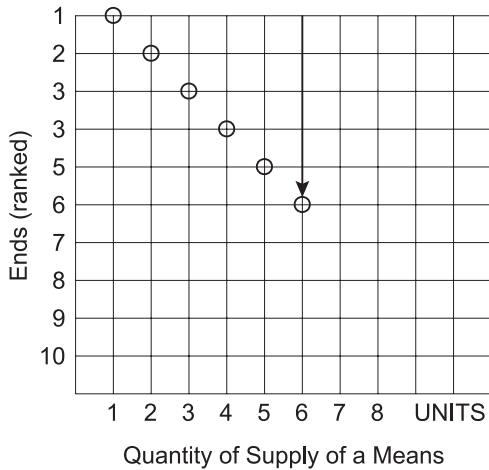


Figure 2. Quantity of supply of means

Source: Rothbard 2004 [1962], p. 26.

Figure 2 does justice to how Austrians conceive of utility; that is, praxeologists adhere to the notion of ordinally ranked utility. This is why figure 2 is not continuous but rather discrete. The variable of quantity is also discrete. After all, we do not make infinitesimally small adjustments in our economic behavior. It cannot make any difference at all whether we buy 0.1 or 0.100001 pounds of butter. An agent would not *act* on such a minute difference. He would be truly indifferent⁶ between the two and so these two options would not even count as the alternatives between which the agent was choosing.

Now, let us note that the demand curve has a price on its horizontal axis, whereas the second graph has utility on this axis. How do they relate to each other? Let us refer to Rothbard’s (2004 [1962], p. 239) considerations on money price determination and let us invoke his graph:

1. 7 grains of gold,
2. the first pound of butter,
3. 6 grains of gold,
4. 5 grains of gold,
5. the second pound of butter,
6. 4 grains of gold,
7. 3 grains of gold,
8. the third pound of butter,
9. 2 grains of gold.

⁶ Before the act of choice. During it, of course, there is no such thing as indifference. For the Austrian view of indifference, see Barnett 2003; Block 1980, 1999, 2003, 2007, 2009a, 2009b; Block & Barnett 2010; Callahan 2003; Collingwood 1945; Rothbard 2004, pp. 265, 267; Wycsocki 2016.

However, if we only assume that each pound of butter is here a relevant unit,⁷ that is, no additional units of pounds can serve a purpose that a single unit cannot, we can see how price relates to utility. To reiterate, we assume that each pound of butter in Rothbard's scale is equally serviceable and constitutes a relevant unit. In our terminology, all these pounds of butter fall into the same equivalence class, that is, they are instances of the same economic good and no n-element aggregates of these pounds can satisfy any end over and above the range of ends satisfied by a single unit of butter. In that case, the less gold we are ready to spend the more units of butter we already have and *vice versa*. For the first pound of butter is valued more than 6 grains of gold and less than 7, while the second pound of butter is valued at less than 5 pounds. It might be said (at a bit of a stretch, though) that money units are a rough measure of utility.⁸ So, it follows that both utility and the price we are ready to pay diminishes the more units of a given good we have.

At this point the following twist is of vital importance. If the demand curve makes use of *the units of the same economic good* on its horizontal axis, then the shape of the individual demand curve must resemble that of diminishing marginal utility; that is, downward sloping. With this small adjustment we can safely say that the individual demand curve is as necessarily non-increasing as the graph of diminishing marginal utility. What can prevent us from positing units of the same economic good on the horizontal axis? The answer is plain 'nothing'. If anything, considering the units of the same economic good is more compatible with ordinary economic practice. Because the same physical goods can translate into different economic goods, we could end up with the situation in which on the horizontal axis there are several economic goods mistakenly conflated.

For example, let us consider the demand for calculating devices⁹). If we insist on defining an actor's end (again as generally as can be) as calculating some mathematical formula, then A — abacus, B — business machines in operation in the last century, and C — modern computers would appear to be the units of the same good. Yet, obviously the three are not equally serviceable.¹⁰ Then, there is no wonder an actor would be ready to pay differentially for them. Also, it is obvious that in this case the demand curve could appear to be pointing upward — the actor buys one or two abaci (they are of little use to him anyway) at a small price; then the price rises (business machines are available) and our man purchases two of them; whereupon the price rises once more (computers come onto the scene)

⁷ Later on, it will transpire that if only we assume the same relevant unit in the value scale, then the individual demand curve follows straight from the law of diminishing marginal utility.

⁸ Obviously, money cannot ever be an exact measure of utility and not only because utility is not cardinal, while money is. What is more, each transaction demonstrates a strict preference and not indifference. For example, buying the first pound of butter for 6 grains of gold demonstrates that we value this pound more than the money we spent, rather than we value them equally.

⁹ These are as vaguely defined as can be so as to illustrate our point.

¹⁰ And this is, according to us, a definitional property of the same goods.

and the actor buys three of them. The straightforward explanation is that we are dealing here with three different goods and the usual shape of the demand curve remains intact if only we split this heterogeneous ‘supply’ into three categories: one of abaci, the second of business machines, and the third of computers. Then the three derivative demand curves for abaci, business machines, and computers separately will necessarily conform into the downward sloping pattern we impute to any respectable demand curve.

The problem of Giffen and Veblen goods

It may seem that the existence of the so-called Giffen or Veblen goods¹¹ effectively undermine our claim that *any* demand curve necessarily slopes downward (or, more weakly speaking, is monotonic and non-increasing). These goods may appear to constitute counterexamples insofar as the respective demand curves for them point upward. Before we analyze two examples of the above goods, let us reiterate that our approach to individual demand curves¹² treats the prices paid by a given economic actor *as a function of* the number of units of the same good. Therefore, the horizontal axis is critical. If we stack the units of different goods on it, then the shape of the demand curve is not a necessity but a contingency. It may be the case then that the demand curve will not conform to the downward sloping pattern we posit.

¹¹ For some of the latest studies over the phenomenon of Veblen goods, see, e.g., Basmann, Molina, & Slottje 1988; Eaton & Eswaran 2009; and Trigg 2001.

¹² An individual demand curve is almost pleonastic in our approach. That is because we cannot speak of a social demand curve for it would mean aggregating the number of units of the same good bought at a given price across people. However, our conception of the same good is relative to an individual. Although the same physical units objectively render the same range of services, the services do not have to satisfy the same ends of different people, or even of a single person at different times. After all, one man’s meat is another man’s poison, and people can indeed change their rank orderings of goods. In our terminology, a given physical good can translate into an economic good for person A and an economic bad for person B. What is more, even if the two physical goods are treated as economic goods by both person A and person B, the ends they satisfy for these two people may only partly overlap (we do not have any objective method for individuating ends abstracting from particular persons cherishing them). Because we cannot individuate those ends and treat them as identical, abstracting from whoever happens to have them, we cannot deduce that a thing is the same economic good for two distinct people. Hence, our approach is more modest and more realistic. We relativize the notion of the same good to a given person and conclude that physically identical units normally constitute units of the same economic good for a given actor. Our point is that the same physical goods normally translate into the same units of the same economic good because they normally (with the exception of snob goods, as will be argued later on) satisfy the same range of ends (however vaguely or murkily they may be defined). Our ‘normally’ caveat is not arbitrary at all. Our definition of the same economic good, following Hoppe (1995) is *equal serviceability* of the units of the physical good for a given actor. What *normally* implies equal serviceability are, of course, physically identical goods.

With this in mind, let us first examine Veblen goods. The apparent demand for them rises the more expensive they are. Veblen goods are luxury or snob goods and they are demanded also (over and above their other functions) precisely because of their high price. That is why they also serve as symbols of social status. Veblen goods typically include cars, jewelry, alcohol etc.¹³ How does our praxeological approach tackle the existence of Veblen goods? Should we make a concession saying that these goods do indeed amount to a counterexample to our posited downward sloping demand curves? The answer is ‘no’. Using our framework, the problem with Veblen goods is that the apparent demand curve for them *is not the demand curve as conceived of praxeologically*. The reason is that our demand curve relates the number of units of the same economic good to the price a given economic actor is ready to pay for them, everything else being equal. The apparently upward-pointing demand curve unfortunately relates more than two things. Because we know it is a sociological fact that people *also* buy luxuries *because of their high price* (the higher the price, the more they buy them, everything else being equal), the price on the vertical axis would not be *merely a function of the number of units of the same good*, but it would also be a constituent of the good a given economic actor is buying. In other words, *price*, when analyzed, has a two-fold function:

1. It is a constituent of the economic good a given actor is buying (in this case it is an independent variable) and
2. It is a function (dependent variable) of the economic good an actor is buying

Because the price is also a constituent of the economic good an actor is buying, it must be the case that when the price varies, the economic goods effectively bought are different economic goods. For now price is an independent variable and the amount of snobbery bought (or social status) is a function of that variable price. Now, the function is monotonic and non-decreasing. The more an actor pays, the more snobbery (or the higher social status) he buys. Therefore, it is no wonder that in this case the demand curve is apparently upward pointing. Yet, the condition of the units of the same economic good on the horizontal axis is irreparably violated. To reiterate, in this case, the varying prices of Veblen products translate into different economic goods. Therefore, stacking them on the same horizontal scale is a violation of the *ceteris paribus* condition; that is, praxeologically speaking, any well-behaved demand curve relates *only two variables*: varying number of units of the same economic good and the respective prices a given economic actor is ready

¹³ However, given Austrian subjectivism, the sky is the limit as to which goods could be used in this manner. States Hayek: “And it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism” (Hayek 1979, p. 52). Also, see the following on this issue: Barnett 1989; Block 1988; Buchanan & Thirlby 1981; Buchanan 1969, 1979; Butos & Koppl 1997; Callahan 2001; Cordato 1989; DiLorenzo 1990; Gunning 1990; Kirzner 1986; Mises 1998; Rizzo 1979, 1980; Rothbard 1979, 1997; Stigler & Becker, 1977; Stringham 2008; West & McKee 1983.

to pay for them. It always remains true that the more units there are at stake, the less we are ready to pay for them, which is nothing but a derivative of the law of diminishing marginal utility.

Let us put this into other words. Our way of looking at this matter is to analyze it in this manner: the supposedly upward sloping demand curve for the snob good is really a *series* of downward sloping demand curves: one for each price, at least theoretically. In other words, in the case of the ordinary demand curve, when prices rise, less is purchased. But in the Veblenian world, when prices move in an upward direction, we are really talking about an entirely different good than the one previously considered. This one, apart from the fact that physically it is the same, is now infused with more luxuriousness than heretofore. It is really a different good, one with its own (downward sloping) demand curve, but one that is shifted to the right (or upwards).

Giffen goods do not pose any real problem either and for exactly the same reason. The so-called Giffen behavior almost imperceptibly smuggles a new component to demand curves; that is, an income effect. It is trite to say that a given actor can buy more of the same economic good when his wages increase over time. He may equally well buy more of good A when good B increases in price relative to good A. In other words, given that there is a time t_1 when one can buy more of good A for the exchange of good B compared to t_0 , an actor *can* start buying more of good A even though its price (expressed in monetary units or relative to any good other than B) rose too. Let us suppose that whisky and cognac are the two most important economic goods to our economic actor. That is, these two goods are close substitutes and they compete most for the actor's attention (the actor's main goal being to get drunk most of the time and any means will do: if cognac is missing, he will imbibe whisky and vice versa). Let us now imagine that the price ratio between the two at t_1 is 1:2, that is for the same price one can buy either 2 whiskies or (disjunctively) 1 cognac. Let us further suppose that at t_2 the price of these two goods increased (in monetary units), that is they are now both more expensive (relative to other goods and/or in terms of monetary units). But more importantly, the prices thereof increased differentially and now, at t_2 , the ratio of their respective prices is 1:3; that is, at present the actor can buy three whiskies for the price of one cognac.¹⁴ So, because *ex hypothesi* these two goods are close substitutes in the eyes of the actor and a change in the price of one can grossly influence the purchase of the other, it may seem that even the increase (in monetary units) in the price of whisky can lead to the higher demand for it. Yet, in this scenario the resulting demand curve is not a disciplined one. What changes

¹⁴ Many mainstream economists analyze such issues on the basis of indifference curves and budget lines. We do not. For a critique of this model from an Austrian perspective, see Barnett 2003; Block 1980, 1999, 2003, 2007, 2009a, 2009b; Block & Barnett 2010; Callahan 2003; Collingwood 1945; Hoppe 2005; Hülsmann 1999; Machaj 2007; O'Neill 2010; Rothbard 2004, pp. 265, 267; Wysocki 2016; Wysocki & Block (unpublished).

here is not only the two traditional variables (quantity of the same economic good and price), but there is also an income effect: given the fact that these two goods in question strongly compete with each other as close substitutes, it is the ratio of their prices that account for the respective demands for them. So, the *ceteris paribus* condition is not met yet again. The point is, when we move along a demand curve, two things, and only two things, are supposed to vary: price and quantity. In the Giffen case, something else, too, alters: income. Thus, we do not have a legitimate demand curve in this case; that is why it is able to become unmoored from its downward sloping condition.

Conclusion

We have attempted to demonstrate that when one is equipped with the precise notion of the relevant unit of the same good, one can easily deduce the downward sloping shape of the demand curve from the law of diminishing marginal utility. If the utility of the units of the same good necessarily diminishes; so does the price when more units to buy are at stake. Therefore, it is inevitable that any respectable demand curve must assume the downward sloping shape, Giffen or Veblen goods being no exception.

References

- Abramsky S. (2005), "Running on fumes", *The Nation* 17.10., n.p.
- Barnett II W. (1989), "Subjective cost revisited", *Review of Austrian Economics*, Vol. 3, pp. 137–138.
- Barnett II W. (2003), "The modern theory of consumer behavior: Ordinal or cardinal?", *The Quarterly Journal of Austrian Economics* 6 (1), pp. 41–65.
- Barnett II W., & Block W.E. (2010), "Mises never used demand curves; was he wrong? Ignorant? No: The Antimathematicality of Demand Curves", *Dialogue*, Vol. 1, pp. 23–31.
- Baruch S., & Kannai Y. (2001), "Inferior goods, Giffen goods, and shochu", in: *Economics Essays. A Festschrift for Werner Hildenbrand*, eds. G. Debreu, W. Neufeind, W. Trockel, Heidelberg, pp. 9–17.
- Basmann R.L., Molina D.J. & Slottje D.J. (1988), "A note on measuring Veblen's theory of conspicuous consumption", *The Review of Economics and Statistics* 70 (3), pp. 531–535.
- Battalio R.C., Kagel J.H., & Kogut C.A. (1991), "Experimental confirmation of the existence of a Giffen good", *The American Economic Review*, Vol. 81, no 4, pp. 961–970.
- Block W.E. (1980), "On Robert Nozick's *On Austrian Methodology*", *Inquiry*, Vol. 23, no 4, pp. 397–444.
- Block W.E. (1988), "Comment on Leland Yeager on subjectivism", *Review of Austrian Economics*, Vol. 2, pp. 199–208.
- Block W.E. (1999), "Austrian theorizing, recalling the foundations: Reply to Caplan", *Quarterly Journal of Austrian Economics*, Vol. 2, no. 4, pp. 21–39.
- Block W.E. (2003), "Realism: Austrian vs. neoclassical economics: Reply to Caplan", *Quarterly Journal of Austrian Economics*, Vol. 6, no 3, pp. 63–76.
- Block W.E. (2007), "Reply to Caplan on Austrian economic methodology", *Corporate Ownership & Control*, Vol. 4, no 2, pp. 312–317.

- Block W.E. (2009a), “Rejoinder to Hoppe on indifference”, *Quarterly Journal of Austrian Economics*, Vol. 12, no 1, pp. 52–59.
- Block W.E. (2009b), “Rejoinder to Machaj on indifference”, *New Perspectives on Political Economy*, Vol. 5, no 1, pp. 65–71.
- Block W.E. (2012), “Thymology, praxeology, demand curves, Giffen goods and diminishing marginal utility”, *Studia Humana*, Vol. 1:2, pp. 3–11.
- Block W.E., & Barnett II W. (2010), “Rejoinder to Hoppe on indifference, once again”, *Reason Papers*, Vol. 32, pp. 141–154.
- Block W.E., & Barnett II W. (2012), “Giffen goods, backward bending supply curves, price controls and praxeology; or, who’s afraid of the Big Bad Boogie Man of Giffen goods and backward bending supply curves? Not us”, *Revista Procesos de Mercado*, Vol. 9, no 1, pp. 353–373.
- Buchanan J.M. (1969), *Cost and Choice: An Inquiry into Economic Theory*, Chicago.
- Buchanan J.M., & Thirlby G.F. (1981), *L.S.E. Essays on Cost*, New York.
- Butos W., & Koppl R. (1997), “The varieties of subjectivism: Keynes, Hayek on expectations”, *History of Political Economy* 29 (2), pp. 327–359.
- Callahan G. (2001), “De Gustibus non est disputandum”, 27.04.
- Callahan G. (2003), “Choice and preference”, 10.02.
- Collingwood R.G. ([2014] 1945), *The Idea of Nature*, n.p.
- Cordato R.E. (1989), “Subjective value, time passage, and the economics of harmful effects”, *Hamline Law Review*, Vol. 12, no 2, pp. 229–244.
- DiLorenzo T.J. (1990), “The subjectivist roots of James Buchanan’s economics”, *The Review of Austrian Economics*, Vol. 4, pp. 180–195.
- Doi J., Iwasa K., & Shimomura K. (2009), “Giffen behaviour independent of the wealth level”, *Economic Theory* 41, p. 247.
- Eaton C.B., & Eswaran M. (2009), “Well-being and affluence in the presence of a Veblen good”, *The Economic Journal*, Vol. 119, no 539, pp. 1088–1104.
- Gunning J.P. (1990), *The New Subjectivist Revolution: An Elucidation and Extension of Ludwig von Mises’s Contribution to Economic Theory*, Rowan-Littlefield.
- Hayek F.A. (1979), *The Counter-Revolution of Science*, 2nd ed., Indianapolis.
- Hicks J.R. (1956), *A Revision of Demand Theory*, Cambridge.
- Hoppe H.H. (1995), *Economic Science and the Austrian Method*, Auburn.
- Hoppe H.H. (2005), “A note on preference and indifference in economic analysis”, *The Quarterly Journal of Austrian Economics*, Vol. 8, no 4, pp. 87–91.
- Hülsmann J.G. (1999), “Economic science and neoclassicism”, *Quarterly Journal of Austrian Economics*, Vol. 2, no 4, pp. 1–20.
- Jensen R.T., & Miller N.H. (2008), “Giffen behavior and subsistence consumption”, *American Economic Review* 98, pp. 1553–1577.
- Kirzner I. (ed.) (1986), *Subjectivism, Intelligibility and Economic Understanding*, New York.
- Koenker R. (1997), “Was bread Giffen? The demand for food in England circa 1790”, *Review of Economics and Statistics* 59, pp. 225–229.
- Machaj M. (2007), “A praxeological case for homogeneity and indifference”, *New Perspectives on Political Economy*, Vol. 3, no 2, pp. 231–238.
- Mises L. von ([1949] 1998), *Human Action*, Scholars’ Edition, Auburn.
- Moffatt P.G. (2002), “Is Giffen behavior compatible with the axioms of consumer theory?”, *Journal of Mathematical Economics* 37, pp. 259–267.
- Nachbar J.H. (1998), “The last word on Giffen goods?”, *Econ Theory* 11, pp. 403–412.
- O’Neill B. (2010), “Choice and indifference: A critique of the strict preference approach”, *Quarterly Journal of Austrian Economics*, Vol. 13, no 1, pp. 71–98.
- Rizzo M.J. (1979), “Uncertainty, subjectivity, and the economic analysis of law”, in: *Time, Uncertainty, and Disequilibrium*, ed. M.J. Rizzo, Lexington, pp. 71–90.

- Rizzo M.J. (1980), “The mirage of efficiency”, *Hofstra Law Review*, Vol. 8, pp. 641–658.
- Rothbard M.N. (1979), “Comment: The myth of efficiency”, in: *Time, Uncertainty, and Disequilibrium*, ed. M.J. Rizzo, Lexington, pp. 91–96.
- Rothbard M.N. (1997), “Toward a reconstruction of utility and welfare economics”, in: M.N. Rothbard, *The Logic of Action: Method, Money and the Austrian School*, Vol. 1, Cheltenham, pp. 211–254.
- Rothbard M.N. (2004 [1962]), *Man, Economy and State*, Scholar’s Edition, Auburn.
- Stigler G.J. (1947), “Notes on the history of the Giffen paradox”, *Journal of Political Economy* 55, pp. 152–156.
- Stigler G.J., & Becker G.S. (1977), “De Gustibus non est disputandum”, *American Economic Review* 67, pp. 76–90.
- Stringham E. (2008), “Economic value and cost are subjective”, in: *The Handbook of Austrian Economics*, ed. P. Boettke, Cheltenham.
- Trigg A.B. 2001. “Veblen, Bourdieu and conspicuous consumption”, *Journal of Economic Issues* 35(1), pp. 99–115.
- West E., & McKee M. (1983), “*De Gustibus est disputandum*: The phenomenon of ‘merit wants’ revisited”, *The American Economic Review*, Vol. 73, no 5, pp. 1110–1121.
- Wysocki I. (2016), “Indifference — in defense of orthodoxy”, *Societas et Ius* 5.
- Wysocki I., & Block W.E. (2018), “An analysis of the supply curve: Does it depict homogeneity among its constituent elements? Another rejoinder to Nozick”, *Management Education Science Technology Journal (MEST)*, pp. 1–11.