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Elements of a Christian Critique of Consumer Theory

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Abstract: *Christian revelation calls into question the assumptions of non-satiation (that more is better) and revealed wellbeing (that the preferences which drive consumer behavior fully reflect their wellbeing), but these assumptions are rarely challenged in normative analysis. This neglect is a result of the unexamined claim that the positive criteria by which assumptions are evaluated are also appropriate for the evaluation of normative assumptions. Normative theory is more sensitive to violations of revealed wellbeing that to violations of non-satiation. In light of the importance of violations of revealed wellbeing in normative theory, economists ought to be less confident in normative analysis based on the assumption, and ought to seek out normative approaches which do not rely on it. JEL: A13, B41, D11. Keywords: satiation, wellbeing, positive-normative distinction, consumption.*

Economists are introduced to the preference axioms—completeness, non-satiation, and transitivity—early in their training. These are introduced as plausible, relatively unrestrictive assumptions to structure our reasoning about choice. Although the intricacies of the math are all-absorbing to new graduate students, the connotations of the modeling exercise are not merely mathematical. Because the models are models of *consumers*, the exercise is implicitly tethered to the reality of consumer choice: the objective function is the utility function of a consumer, and the intuitions on which the models are based are our intuitions about ourselves as consumers. It seems plausible that consumers are after something when they make purchases, that they have some notion of what they are after, that more of

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what they want is good, and that they are at least somewhat consistent in their choosing.

From these simple beginnings economics derives a host of important results in positive and normative economics. Among the many normative results are that price equals marginal value in competitive markets, and that any allocation in which each agent can have more of what he or she wants is a Pareto improvement. Our confidence that these theoretical results are plausible is based on the plausibility of the foundational axioms. If the axioms themselves are questioned, the welfare results must be modified.

The Christian economist, well-versed in scripture and economic theory, cannot help but notice that the axioms of choice appear to conflict with the description of choice in the scriptures. Set against the axiom of non-satiation, Christ's clear warnings about the dangers of wealth are striking: "But woe to you who are rich, for you have received your consolation" (Lk. 6:24). This tension dates back to the beginning of economics as a social science: reacting vehemently to the praise of the moral goodness of wealth in Nassau Senior's inaugural lecture (Senior, 1966 [1826]), Newman (1982 [1873]) draws a sharp contrast between the claim that "more is better" and the teachings of the Christian tradition: "indeed one is taken by surprise, one is startled, on meeting with so very categorical a contradiction of our Lord, St. Paul, St. Chrysostom, St. Leo, and all Saints (p. 69)."[1]

One might reconcile the economic and Christian traditions on consumption by noting that Christ's advice is for Christians only, but this ignores the constant warnings, made in universal terms, against attachment to wealth in the Old as well as the New Testament. Amid the clear teaching that material goods are good in themselves, and can even be a sign of God's favor, the wisdom literature and the prophets teach clearly that material goods often become idols, leading men away from God and enslaving them to an unhappy materialism: "In his riches man lacks wisdom; he is like the beasts that are destroyed" (Ps. 49:13).

How comfortable should Christian economists be with this contradiction between the axioms of choice (particularly non-satiation) and the unmistakable warnings about wealth in Christian teaching? Most Christian economists avoid the conflict in the same way that secular economists reconcile the conflicting claims of economics and ethics: by consigning the scriptural witness to normative economics, and the axioms of choice to positive economics. Unfortunately, this tidy scheme strips Christian concerns out of economics entirely. As a practical matter Christian economists often ignore the scriptural witness, even in their normative

analysis. The first and second welfare theorems and the relationship between price and marginal value are predicated on the assumptions of positive economics, leaving little room in normative analysis for Christian warnings about wealth and happiness. After carefully distinguishing the positive analysis, with its axioms of preference, from normative analysis, in which the Christian tradition ought to play a role, the Christian witness is banished from economics altogether, and the axioms of choice reign in both the positive and normative spheres. This scenario plays out in a general way across most moral traditions in economics, religious and secular. Ethical concerns, confidently banished from positive analysis, find no place in normative analysis either.

What is the theologically minded Christian economist to make of the absence of anything resembling a Christian worldview from normative as well as positive economics? What difference does the scriptural witness make for normative economics? This article attempts a treatment of these questions. In particular, I draw on the resources of Christian theology to question the assumptions of non-satiation (that more is better) and "revealed wellbeing" (that the preferences on which consumers act represent their true wellbeing). These two assumptions are crucial supports for the normative content of consumer choice—that we can infer value by observing consumer choice. The economist who calls them into question must also call into question the conventional framework for normative analysis—that observed consumer tradeoffs carry primary normative weight.

Section one draws on the insights of scripture to sketch the outlines of a normative approach to consumption within which satiation and revealed wellbeing can be addressed. Christian theology on consumption calls into question the assumptions that more is better (non-satiation) and that the preferences which drive consumption fully reflect the consumer's true interests (revealed wellbeing). Section two suggests two factors which insulate normative economics from ethical critique: the timing of positive and normative concepts in the teaching of economics, and the implicit assumption that good positive models automatically qualify as good normative models. Section three examines the assumptions of consumer theory in light of the theological reflections of section one. As a practical matter, the assumption that the consumer acts on preferences which reflect true wellbeing is more foundational and more problematic than non-satiation. Section four outlines and evaluates three responses to Christian concerns about consumer theory: do nothing, develop more philosophical approaches to normative questions, and incorporate concerns about

preferences directly into economic models. Section five offers some concluding thoughts.

1 The Purposes and Dangers of Wealth in Scripture

Whatever one's willingness to tolerate unrealistic assumptions about consumer behavior as a means of *positive* prediction, the Christian economist recognizes in the scriptures a true account of the moral drama of consumption and material wellbeing. The various Christian traditions find in the Bible an orientation towards this world's goods which emphasizes the goodness of material creation while at the same time pointing out the serious spiritual danger of riches. Fallen human beings often take the gifts of creation and turn them into idols, which supplant God in man's heart. Thus, material goods are "good," but they are not good absolutely; they are good only when they are placed at the service of a person's ultimate ends—life with God and in community. A proper perspective on material goods places them within the context of the spiritual life—as gifts from God, to be used as such. When goods become absolute ends, they become idols.

God created the heavens and the earth, and pronounced each part of creation good (Gen. 1:31). At the pinnacle of this good created order God places man, made in his image, and he gives to Adam and Eve the earth he has created. The commands which God gives to the first couple, to "have dominion" (Gen. 1:28), to "tend the garden" (Gen. 2:15), to "eat of the fruit" (Gen. 1:29, 2:16), instruct us on the purpose of the created material world in the lives of humans. The world was supposed to meet the material needs of Adam and Eve—they were to eat of the fruit of the trees of the garden. Their work tending the garden contributed to the fruit it produced for their needs.

Genesis 1 and 2 paint a clear picture of a material order created good, and given as a gift to mankind, in which to work and meet human material needs. It is a mistake, however, to see creation as simply a present of good things, without reference to the relationship between the giver and the recipients. God did not give creation to mankind the way one stranger transfers a property deed to another. It was a gift, given within a relationship. The creation account in the second chapter of Genesis tells the story of a father setting up an establishment for his son, not of a Deist God winding up a material world clock and leaving it to the human race. Adam and Eve are not left to themselves, and they do not just work for themselves; they work for and with God, and the goodness of the garden and of their life in it cannot be divorced from their relationship to the creator (John Paul II,

1987, para. 29-30). God visits the garden and those in it (Gen. 3:8), and there are trees whose fruit the new humans may not eat (Gen. 2:17).

Thus from the beginning the goodness of the material world, and of material consumption, can only be fully evaluated in the context of God's gift of creation and of man's vocation in the world. Material goods are more than good—they are good *gifts*. An important aspect of their value is that they are given to us by a loving Creator, with whom we are supposed to be friends. It is a serious mistake to evaluate the material world without regard to the goods of the spirit—our relationship to God and to other created souls. It is notable that the Fall involves a change in context for created goods. Eve sees that the forbidden fruit is "good to eat" (Gen. 3:6), but wrenches that created goodness out of its place in the relationship between God and man. The "apple" no doubt had a positive marginal utility in Eve's utility function, but her desire for it was a snare and an illusion, and Eve's choice made manifest her rejection of the relationship God had established with her at creation.

The Fall changes the relationship between God and man, between men, and between man and the rest of the created order. Each person is estranged from God, and from each other person. Not only are goods now difficult to produce (Gen. 3:17-19), but fallen men persistently see material goods as idols, as good in themselves, apart from and often in competition with their duties and relationship to God.

Thus is set a pattern seen throughout salvation history: material consumption and wealth are gifts of the Creator, but man, instead of enjoying that wealth in right relationship with God the giver, sets his wealth up as a false God, placed above God or in place of him and religious duty. John Paul II (1987) calls this perverse approach to consumption a "reversal of values":

> There are some people—the few who possess much—who do not really succeed in "being" because, through a reversal of the hierarchy of values, they are hindered by the cult of "having." … The evil does not consist in "having" as such, but in possessing without regard for the quality and the ordered hierarchy of the goods one has. Quality and hierarchy arise from the subordination of goods and their availability to man's "being" and his true vocation (para. 28).

God the creator gives goods to his creatures, for their benefit and his glory. They in turn are to use those goods to meet their needs and to glorify God through gratitude and sharing with each other. Instead, human beings put

goods at the top of their hierarchy of values, ignoring God and creating misery and unhappiness for themselves.

Both Old and New Testaments testify to this inversion of values and its consequences.[2] Even the people of God, in a covenant relationship with the Lord, forget the Lord in the riches he has given them, using them for idolatrous worship, and neglecting duties of justice and religious piety in favor of consumption and accumulation. When goods are used in this way, as ends in themselves without reference to their true value and use, they fail to satisfy, and incur God's wrath. Christ's advice to build up treasure in heaven (Mt. 6:20) and to realize that "one's life does not consist in the abundance of possessions" (Lk. 12:15) is a plea not to evaluate earthly goods as ultimate ends, as the measure of "one's life."

The implication of Christian theology for economic theory is that the goodness of material goods depends crucially on the way their goodness is evaluated by the person consuming. There are several frames of reference within which consumption decisions might be made; not all of them value consumption appropriately. Consider two cases. In the first, material goods are idols, treated as ultimate goods. In the second, material goods are instrumentally good, put into perspective by reflection on the spiritual and religious goods they promote. These two cases each correspond to a different objective function for consumers, but only the second is justifiable as a basis for normative analysis.

A review of the scriptural witness raises two issues which are potentially important for the normative analysis of consumption. First, consumers may act on preferences which do not reflect their true interests. Departures from true preferences are a result of the Fall, and are thus systematic; they are not mere random optimization errors. If consumption becomes an idol, preferences are skewed. Call this distortion of preferences the "preference-wellbeing disjunction"—choice may reflect momentary preference, but it need not reflect underlying wellbeing. Second, satiation may be much more practically important in economics than is usually assumed; more may not be better, even though many act as if more is better.

Section three will evaluate the relative importance of the preference-wellbeing disjunction and satiation in a critique of consumer theory. Before turning to this task, however, we must address a common objection to the whole enterprise—that the positive-normative distinction excuses economists from any serious inquiry into the content of preferences and the connection of those preferences to real human wellbeing.

2 u(X) and u′ in Economics

It is perhaps understandable that concerns about non-satiation and revealed wellbeing should be ignored in positive analysis,[3] but why are they so seldom addressed in normative theorizing? How does it come to be that ethical and moral concerns are stripped out of *normative* analysis? To trace this process, we must approach satiation and revealed wellbeing in the same order that most economists approach them, as positive assumptions first, then as normative assumptions, in order to demonstrate how this order blinds economists to the normative consequences of these assumptions. The confusion is a product of the timing of positive and normative analysis in most courses, combined with the assumption that models which promote positive goals of prediction and explanation are *consequently* well-suited for normative analysis.

Non-Satiation and Revealed Wellbeing as Assumptions of Positive Economics

Consider the familiar utility function from consumer theory, introduced in microeconomic theory courses at every educational level: u(X), where X is an N-dimensional vector of goods and services. If a consumer's preference relation $\succsim_p$ over the domain of X can be described by u(X)—for any two bundles X_1 and X_2, if $u(X_1)>u(X_2)$, then X_1 is strictly preferred to X_2—then $\succsim_p$ is complete and transitive (Mas-Colell, Whinston, & Green, 1995).

In most microeconomics courses, the student is introduced to completeness and transitivity early on; at the same time he is also introduced to non-satiation. This assumption is conventional, and its nature well-known. The theorist assumes that $u' \geq 0, \forall X \in R^N$ (the first derivative being positive for at least one element of u'), and that u'' is negative semidefinite. This objective function embodies a set of specific assumptions about the goals of human behavior: human beings care about their own material consumption; more consumption is preferred to less, but is subject to diminishing returns.

The foundations for the standard exposition of choice behavior go beyond the specification of axioms of choice and outline of their implications, however. We might assume at this point, for example, that preferences $\succsim_p$ in fact represent wellbeing. To make the concept clearer, we can define a wellbeing function w(X), defined over the same domain as u(X), which represents the person's *true* preference order $\succsim_w$ over X.[4] If for every X_1 and X_2 such that $u(X_1)>u(X_2)$, $w(X_1)>w(X_2)$ also holds, then anything that reveals the preference order $\succsim_p$ also reveals the preference order $\succsim_w$. Call

this the "revealed wellbeing" assumption—anything that gives us insight into the preferences which drive consumption also gives us insight into wellbeing.

If there exists some X_1 and X_2 such that $u(X_1)>u(X_2)$ and $w(X_1)<w(X_2)$, then the utility function represents a set of preferences which do not fully capture the wellbeing of the consumer. In this case, the revealed wellbeing assumption does not hold. Call the violation of revealed wellbeing the "preference-wellbeing disjunction."

"Revealed wellbeing" should not be confused with "revealed preference." Revealed preference theory explores what can be inferred about underlying preference relations from observed behavior. Revealed wellbeing is the assumption that the preferences revealed also reflect the person's wellbeing. Revealed preference results in statements like "if bundle x is affordable when bundle y is chosen, then y is revealed preferred to x." Add in the revealed wellbeing assumption, and the statement can be modified: "if bundle x is affordable when y is chosen, then the chooser is better off with y than with x." Revealed wellbeing has important normative implications; for example, it underlies the normative claim that relative prices, through their relationship to marginal rates of substitution, give us information on the underlying value of goods to consumers.

The relationship of u(X) to w(X) is seldom dwelt upon in positive analysis. Does u(X) describe mere "preferences"—the objective function the consumer acts as if he is maximizing, without regard for whether u(X) represents the person's true wellbeing? Or does u(X) represent the consumer's wellbeing as well as his preferences? Are preferences and wellbeing the same? Economists pay little attention to the meaning of u(X) when specifying the consumer choice model, because the relationship between u(X) and wellbeing is not crucial to the positive analysis and explanation of choice behavior. If we care only about explaining how people react to changes in their constraints, then we do not care whether their behavior improves their wellbeing, or whether it simply relieves the itch to satisfy the preferences which drive consumption.

Because it does not matter to the positive analysis whether revealed wellbeing holds or not, economists are not careful to specify when they are assuming revealed wellbeing and when they are not. Sometimes u(X) is assumed to capture preferences $\succsim_p$ only, without any reference to wellbeing $\succsim_w$. Often, however, u(X) is assumed to contain information about consumer wellbeing. This latter position is more frequent, since it makes the intuitions of the model easier to communicate to struggling students. Students are more likely to understanding diminishing returns in terms of the fourth scoop of ice cream than in terms of the second derivative

of the utility function. Economists turn to intuitions about wellbeing to sell the model (the fourth scoop will make us sick, the second newspaper has a small value to us when we already have one in possession) and in doing so they promote the assumption that u(X) reflects wellbeing, and not just preference. Because the assumption of revealed wellbeing is not necessary to the positive analysis, economists rarely note when they are assuming it and when they are not. This is a critical mistake, and results in confusion about the normative status of consumer choice in welfare analysis, addressed later in the typical undergraduate or graduate course.

A more specific example will make the problem clearer. In the positive analysis of consumer behavior, the non-satiation assumption takes the form of a sign restriction on the first derivative of the utility function. Beyond its status as a description of the properties of a posited utility function, what does $u' \geq 0$ mean intuitively? There are several possible intuitive accounts:

1. People prefer more over less; their preferences for more are aligned with their wellbeing (revealed wellbeing). They are in fact better off with more than with less.
2. People prefer more to less, but their preferences for more are poorly aligned with their wellbeing (preference-wellbeing disjunction). Consumers are unaware of the disjunction.
3. People prefer more to less; their preferences for more are poorly aligned with their wellbeing (preference-wellbeing disjunction). Consumers know this, but cannot fully control their choices, which are driven by preferences for more.

These three descriptions differ markedly from one another. Description one assumes both non-satiation and revealed wellbeing: more is better for consumers, who therefore choose more. The second and third assume that, although consumers choose more, their preferences for more may lead to welfare-damaging consumption. The last two descriptions exemplify two ways that preferences and wellbeing may diverge. In the second description the consumer is unaware that he may have false preferences for more, and his behavior maximizes preferences which may be harmful to wellbeing. In the third description the consumer is internally conflicted: he knows that his preferences are not aligned with his wellbeing, but he is unable to resist fully the urges embodied in his preferences. Under this description, even if consumers judge that more is not better, they may *act* to choose more over less. Consumers may choose more against their better judgment.

Note that if all we care about is a positive analysis of consumer behavior—the effect of prices on quantity demanded, income and substitution effects—then it does not matter which of the three descriptions we adopt. We need say nothing more than $u' \geq 0$. In all three descriptions, consumers choose more over less, will look for substitutes for any good whose relative price increases, and will seek to expand their choice sets. For this reason, economists are not very careful to distinguish between these three descriptions, and will sometimes offer more than one of them when laying out the preference axioms of consumer theory.

Lost in Translation: The Unreflective Adoption of Positive Models in Normative Analysis

Later on in the typical course, when students are introduced to normative welfare analysis (consumer surplus, externalities, deadweight loss, general equilibrium), both non-satiation and revealed wellbeing are implicit: more is better, and any arrangement in which at least one person chooses more while others consume no less is assumed to be better. Moreover, consumer choices reveal marginal rates of substitution, which reveal information about the preferences and wellbeing of the consumer. This unremarked assumption of non-satiation and revealed wellbeing is an example of how seemingly innocuous positive assumptions can unintentionally carry enormous normative freight—when these assumptions are of *greatest* import (in normative analysis) their justification is buried deep in the past, in the first few weeks of the course, and is not dug up and examined again. In the case of revealed wellbeing, the assumption has not been justified at any point in the course, but has slipped in unnoticed.

To the extent that economists discuss the meaning of $u(X)$ and $u' \geq 0$ at all, they do so in the positive analysis of consumer behavior, when the distinctions outlined above do not matter. When economists turn their attention from positive to normative analysis, however, the discussion of the nature of the assumption $u' \geq 0$ becomes crucially relevant, and the three interpretations of its meaning have different implications. For example, willingness to pay and the marginal rate of substitution are only valid measures of value under description one, in which more is in fact better and consumers prefer more. Under descriptions two and three, no claim is made that consumer choices or preferences embody anything real about consumer wellbeing. As a result, willingness to pay, marginal rates of substitution, and the use of competitive prices to measure marginal value may be misleading.

It is at just this point that the nature of the benefits delivered by

consumption is most relevant; they are the value foundation of any normative claims made, after all. That economists fall silent here is puzzling and dismaying. A simple list of normative topics makes the stakes clear; it includes every topic in which the marginal rate of substitution is used as an implicit measure of value, or in which the welfare of agents and mutually beneficial exchange are part of the analysis. An incomplete list includes:

- *consumer surplus*: the height of the income-compensated demand curve contains information about the consumer's marginal rate of substitution, which is assumed to reflect the consumer's welfare.
- *deadweight loss* (in goods markets and labor markets): makes use of consumer surplus.
- *externalities*: market price is assume to represent marginal value to consumers.
- *public goods*: willingness to pay is the measure of value in the calculation of benefits.
- *the first and second theorems of welfare economics*: both rely explicitly on marginal rates of substitution as measures of value to agents.
- *efficient taxation*: price as a measure of marginal value, reflecting the underlying marginal rates of substitution of consumers.

If economists wish to say anything about normative issues—about the welfare effects of exchange, about externalities and public goods, about tax and trade policy—they must be more careful about the relationship between u(X) and wellbeing, and about what exactly they mean by $u' \geq 0$. In most normative analyses, description one, that preferences u(X) reflect wellbeing w(X), is implicit. I am aware of no explicit justification for this assumption in a normative analysis.

As evidence, consider a sample of leading undergraduate and graduate micro texts. What is striking in each of the following examples is the qualified confidence in non-satiation as a positive claim, and the lack of any discussion of its limits as an assumption of welfare analysis. Mankiw (1998), in his treatment of consumer choice, uses both the language of preference and happiness. In his descriptions of the axioms of choice he claims that "consumers usually prefer more of something to less of it" (p. 452), but he uses the term "happiness" to describe what is held constant along an indifference curve (pp. 450-451). By this Mankiw implies that preferences are based on wellbeing, although he does not explicitly equate the two concepts. Mankiw's treatment of welfare economics, much earlier

in the text, does not address non-satiation, but instead uses willingness to pay and consumer surplus as his measures of value. While Mankiw does qualify the use of consumer surplus by excluding it as a measure of value for addictive goods, for all other goods "consumer surplus does reflect economic well-being" (p. 138).

Pindyk and Rubinfeld (2009) assert that the basic axioms of preference, including non-satiation, are plausible: "We believe that these assumptions hold for most people in most situations" (p. 70). They claim that these assumptions are believable, although they do not hold across all consumer behavior. In their defense of non-satiation as a positive claim, Pindyk and Rubinfeld invoke the positive success of the model which incorporates these assumptions: "Our basic model makes some simplifying assumptions. But we also want to emphasize that this model has been extremely successful in explaining much of what we actually observe regarding consumer choice and the characteristics of consumer demand" (p. 69). Thus, they appeal both to intuition and to empirical success; without claiming that the non-satiation assumption covers all consumer behavior, they assert that more is often better than less.

In their welfare theory, Pindyk and Rubinfeld (2009) take for granted that consumer preferences measure true consumer wellbeing, and that more is better: "Consumers buy goods because the purchase makes them better off. Consumer surplus measures how much better off individuals are, in the aggregate, because they can buy goods in the market" (p. 132). Because the assumptions of non-satiation and true preferences cover "most situations," the authors feel little need to qualify their observations about consumer surplus (and later, economic efficiency) by noting that more may not always be better. The positive strengths of the consumer model, and the intuitive appeal of the preference axioms, undergird the confidence with which Pindyk and Rubinfeld approach welfare analysis.

The same implicit confidence in non-satiation is evident in graduate textbooks. Mas-Colell, Whinston, and Green (1995), in their exposition of preference theory, assert that "it is often reasonable to assume that larger amounts of commodities are preferred to smaller ones" (p. 42). The tone of the text suggests that the axioms are primarily founded on intuition, on what seems "reasonable" and "realistic." When they turn their attention to welfare analysis in a general equilibrium framework (500 pages later), the authors refer the reader back to the section on preferences, but do not discuss the appropriateness of the preference axioms for normative analysis. The choices of the consumers in a Pareto optimal allocation are normative, and the only permissible interventions address the justice of the initial distribution, in line with the second theorem of welfare economics (p. 524).

There are two things to be noted about these three textbooks. First, none of the authors carefully distinguishes between the various interpretations of the assumption $u' \geq 0$; all are confident that, for the most part, more *is* better, and that consumers act for the most part on that principle. Second, in their normative sections all of the authors adopt interpretation one: people choose more because it improves their wellbeing. Mankiw alone makes an exception, for addictive goods. There is no discussion in any of these textbooks about revealed wellbeing, which nevertheless is implicit in all of the analysis contained in them.

This brief tour of a sample of leading textbooks documents the straightforward adoption of non-satiation and revealed wellbeing in both positive and normative economic theory. Two justifications for these assumptions are given, but only in the positive treatment of choice. First, as positive assumptions they yield reasonably accurate descriptions and predictions of demand behavior. Second, they are intuitive, established by introspection and observation.

Both justifications for these assumptions in normative analysis are problematic. The first, that non-satiation performs well as a positive assumption, and therefore is justified as a normative assumption, does not withstand scrutiny, even if one accepts the premise of positive success.[5] The criteria of positive analysis (empirical prediction and explanation, parsimony) are not the criteria of normative analysis. For example, parsimony may be valuable in positive modeling, as a means of generating simple descriptions of behavior in markets, but is not necessarily a virtue in normative analysis. Normative analysis, which purports to describe the benefits and costs of institutions and policies in terms of actual human welfare, must be sensitive to the truth or falsity of its account of human motivations. For example, any of the three descriptions of $u' \geq 0$ will do for positive demand analysis; the first, that more is in fact better and is in fact chosen, is desirable on the grounds of parsimony, since it does not require the theorist to model any disconnect between preference and choice. Nevertheless, if the first is not in fact a true description, then it is the worst assumption for the normative analysis! One cannot appeal only to positive criteria of model evaluation in choosing assumptions for normative analysis.

When competing assumptions, both of which produce the same predictions, have very different normative implications, parsimony is an insufficient grounds for choosing among the models for normative analysis. Yuengert (2006) offers an extended discussion of this point in the context of models of rational addiction. The motivations, choices, and wellbeing of human beings are complex; normative analysis is much more

sensitive to that complexity than positive analysis. Indeed, if normative analysis is to address itself to "what ought to be," in light of the values people actually hold, it must take into account what those values really are.

If economists cannot appeal to purely positive criteria in choosing assumptions for normative analysis, they are left with appeals to intuition and introspection. This, however, forces the Christian economist to wrestle with Christian teaching on the purpose and dangers of material goods. Christian revelation does not support the intuition that more is always better, or that people always choose what is best for them. The scriptures suggest that people often choose more to their own detriment, and that the maximization of their preferences will not promote their wellbeing. If this is true, how should economics incorporate this insight into normative models? The next section will argue that it is more important to incorporate the revealed wellbeing assumption than the non-satiation assumption in normative work.

In the face of this need to take a stand on the content of preferences in order to ask normative questions, there is an option we have not yet discussed: eschew all normative analysis. It must be noted that, however fierce their assertions of positivist purity, few economists are willing to forego all normative claims. Certainly no teacher is. Someone who refuses to take a normative stand on non-satiation and revealed wellbeing must abandon all claims that prices reflect marginal value to consumers, all claims that market exchange leads to desirable or optimal outcomes, and all claims that certain types of market interventions can be welfare-improving. In effect, he must renounce the use of the words "better," "efficient," "optimal," and "beneficial." I suspect there are few economists who can resist the use of these terms. Unless they are willing to be frank about the use of non-satiation and revealed wellbeing in normative analysis, honesty should compel them to exclude normative terms from their professional vocabulary. This positivist propriety will render most economists uncomfortably mute, I suspect.

3 Relative Importance of the Preference-wellbeing Disjunction and Satiation in Theory

The reading of the Christian tradition on consumption in section two suggests two critiques of consumer theory:

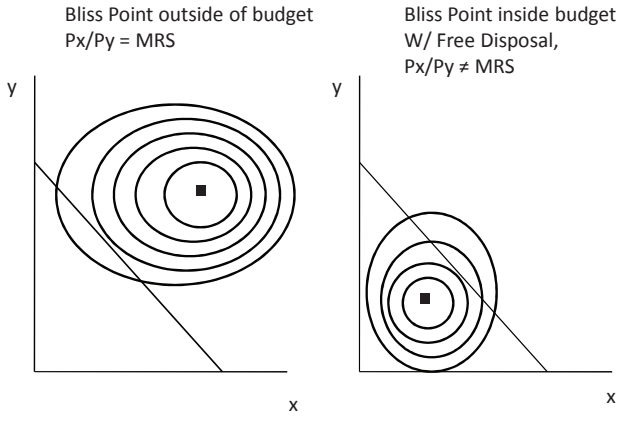
1) *satiation*: more is not always better.
2) *preference-wellbeing disjunction*: consumers do not always choose what is best for them.

Scattered examples of both critiques can be found in consumer theory already. Satiation plays an important role in the welfare analysis of Easterlin (2006) and Frank (1999); Gruber and Köszegi (2001) introduce a disjunction between preferences and wellbeing by the incorporation of time inconsistency into the analysis of rational addiction. This section argues that, of these two critiques, the second is most important. The satiation assumption does not by itself require a radical change in choice models, and introducing a disjunction between choice and wellbeing into consumer theory will encompass the underlying concerns raised by satiation.

Begin with satiation, assuming that revealed wellbeing holds. If for some $X \in R^N$, $u' \leq 0$ for all goods, then preferences are satiated at some level of consumption, and more is not always better. Satiation in all goods implies the existence of "bliss points," absolute maxima of the utility function. When the bliss point lies outside of the budget set (and consumption of both goods is positive), as in the left hand graph in figure 1, the analysis of choice is not materially affected: at the optimal consumption bundle, the ratio of the marginal utilities of the Xs equals the ratio of prices.

The rapid growth in the standard of living in industrial economies over the last century raises the possibility that the bliss point might lie inside the budget constraint, as in the right hand graph in figure 1. Andersen (2001) and Witt (2001) incorporate satiation as a potential constraint on growth. Clearly, the consumer whose bliss point lies inside the budget set would not choose a bundle on the budget line; as a result, the prices he faces contain no information about his marginal rate of substitution (which does not exist at the bliss point).[6]

Figure 1
Economics of Satiation, Bliss Points



Although the rapid increase in material standards of living over the last century increases the plausibility of satiation for wealthy consumers, in fact the non-satiation assumption is weaker than it at first appears; there may in reality be few bliss points. Recall that the non-satiation assumption is $u' \geq 0$, and that the first derivative is strictly positive for at least one element of X. There are several plausible candidates for goods whose marginal utility is always positive. For example, the presence of altruism introduces either the utility of others, or the amounts of aid given to others, into preferences. The expansion of the number of goods via the introduction of intertemporal choice or product differentiation increases the likelihood that at least one good exhibits non-satiation. Witt (2001) and Andersen (2001) appeal to ongoing product differentiation to avoid satiation in evolutionary models of consumption. If the satiation point for leisure is greater than the number of hours in a day, time constraints may keep the satiation point outside of the leisure-consumption budget set. Spiritual goods, to which consumers may turn once their material needs are met, appear to be less susceptible to satiation (Fogel, 2000).

Figure 2
Non-Satiation in at Least One Good

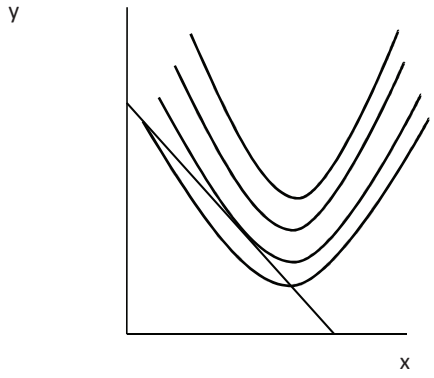
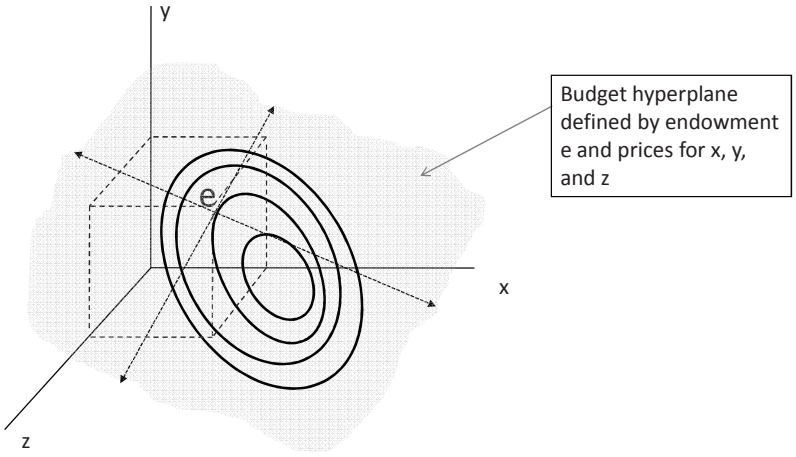


Figure 2 shows the difference made by non-satiation in at least one good. If at least one good (in this case, good *y*) is not characterized by satiation, then there are no bliss points, no one will consume past the point of negative marginal utility for any good, and prices will be related to underlying marginal rates of substitution. The ease with which one can come up with plausible non-satiated goods makes it unlikely that non-satiation *by itself* is a weakness of the conventional model of the consumer.

To see this clearly, one need only ask why any sated person would consume past the bliss point if he were aware of its location. A fully competent consumer, whose preferences are fully aligned with his wellbeing, would never consume past a bliss point. This point can be made in another way. Aumann and Dreze (1986) note that consumers, faced with a vector of market prices, choose from a budget set whose indifference contours exhibit satiation. Every choice problem with well-defined preferences can be represented as a satiation problem. A bliss point is simply the point at which you will stop consuming. Consider figure 3, which shows the shaded budget hyperplane of a consumer with endowment e, facing market prices for goods x, y, and z. A projection of the consumer's utility function onto the budget hyperplane results in a set of indifference curves which exhibit satiation. This consumer's preferences may satisfy the non-satiation axiom: the figurative "bliss point" in this case is simply the utility-maximizing consumption bundle. There is no difference between assuming that the consumer can choose this figurative "bliss point" and that he will choose a more absolute one when it is affordable.

Figure 3
All Constrained Choice Problems
Have "Bliss" Points



All this is to say that the revealed wellbeing assumption makes satiation irrelevant—a fine point of theory that can be handled via the introduction

of new goods, or appropriate transfers from sated consumers to those who are not sated (Aumann & Dreze, 1986). When the revealed wellbeing assumption is called into question, one no longer needs the concept of satiation to critique consumer theory. Because consumers are no longer assumed to choose optimally (in terms of their wellbeing), the presence or absence of bliss points does not matter. Since u(X) no longer yields the same ranking as w(X), choices driven by utility maximizing behavior cannot be guaranteed to maximize w(X). Whether or not consumer behavior reveals information about preferences, it need not reveal information about wellbeing. The consumption bundle that maximizes utility, whether in figures 1, 2, or 3, may not maximize wellbeing, whether wellbeing exhibits satiation or not.

4 Taking the Preference-wellbeing Disjunction Seriously

In light of the Christian witness of the scriptures, normative theory (at least) ought to take the preference-wellbeing disjunction seriously, and incorporate into its analysis the possibility that people's choices may not promote their wellbeing. There are three possible responses to this challenge:

1. Maintain the current approach, in which models developed for positive analysis are used for normative analysis, knowing that the models are approximate and that as a result normative conclusions are likewise approximate.
2. Develop normative theories which do not explicitly model consumer choice at all, and so which are not dependent on revealed wellbeing.
3. Develop models which explicitly incorporate the preference-wellbeing disjunction, for normative analysis at least.

The first response accepts the criticism that models of consumer behavior, developed for positive analysis, have real shortcomings when used as the basis of normative analysis, but rejects the need to develop more complex models for normative analysis. This position downplays the importance of the critique: non-satiation does not hold across the entire domain of choice, but it is close enough, and normative analyses which ignore satiation will for the most part not mislead. This is the position of the microeconomics teacher who, faced with the task of teaching the first and second welfare theorems late in the semester to restless students, judges that addressing the realism of the revealed wellbeing assumption in particular, or the axioms of preference in general, will only confuse

students who at this point in the course are trying to master the Edgeworth box.

The argument that the assumption of non-satiation is as a practical matter "close enough" only makes sense if we have some metric of "closeness" (McCloskey, 1994). The concept of approximation is meaningless without an account of what is being approximated. Here, as in the discussion of the role of realism in positive and normative analysis, the rules are different for positive and normative analysis. When we say revealed wellbeing is "close enough" in positive analysis, we mean "close enough to the reality of choice to predict behavior"—that more complicated models which incorporate a preference-wellbeing disjunction do not improve prediction or explanation. When we say "close enough" in normative analysis, we mean something very different. In normative analysis "close enough" means "close enough to the reality of choice and wellbeing to generate accurate measures of wellbeing." In the normative realm we must evaluate the revealed wellbeing assumption by how well it captures what human beings are like, and on what distortions in judgments of benefits and costs are likely to result from its adoption. The review of Christian revelation in section two suggests that violations of the revealed wellbeing assumption are as widespread as the effects of the Fall. Normative analysis is less robust to unrealistic assumptions than positive analysis.

Hausman and McPherson (2009) give some practical guidance about the shortcomings of the revealed wellbeing assumption. They accept the problems associated with the revealed wellbeing assumption, but argue that the choices of consumers may still have "evidential" value in some contexts. Although consumers do not always choose what is good for them, their decisions are not arbitrary, and they have good reason to act to promote what they think are their interests. In those circumstances when consumers are both acting out of self interest and are reasonably well-informed, normative analysis ought to take their choices seriously.

A second approach, represented in the work of Sen (1999) and Sugden (2004), avoids explicit models of wellbeing, and makes no attempt to defend revealed wellbeing; indeed, it is willing to entertain doubts about the entire structure of the neoclassical model of consumption: well-defined preferences, consistent optimizing behavior, and rationality. Instead of building a normative theory of wellbeing on the ability of consumers to choose what is best for them, these authors emphasize the related concepts of freedom (Sen) and responsibility (Sugden). Sen's capabilities approach is founded on the ability of individuals to realize "goods they have reason to value." He argues that, even if individuals sometimes squander

the opportunities given to them to achieve real human goods, public policy should still seek to maximize those opportunities. Sugden (2004) takes a similar tack, emphasizing that "if an individual is understood as a continuing locus of responsibility, any increase in that individual's lifetime opportunity locus is good for her in an unambiguous sense" (p. 1018). Sugden's normative analysis of competitive markets is based on the opportunities it offers, not on the choices consumers actually make.

Both the approaches of Sen and Sugden have the advantage of insulating normative analysis from claims that human consumption choices necessarily advance the wellbeing of the consumer, or that human preferences are even coherent. It is implicit in the analysis of both that individuals ought to be rational, using their reason to evaluate their consumption choices, but neither assumes that human beings are anything like the rational neoclassical consumer. Whether or not more is better for human beings, whatever the limits on non-satiation, each argues that the expansion of the opportunity set (for consumption in Sugden or functionings in Sen) is morally desirable.

The approaches of Sen and Sugden, by focusing on the size and character of the opportunity set instead of the nature of the choices made from it, exempt us from having to take a stand on which preferences are healthy, and which are consumeristic. No matter how poorly people may choose, or how they may abuse their freedom, they argue, we ought to give them the opportunity to use that freedom well. The high value placed on freedom is respectful of the basic good of practical reasonableness, outlined in Finnis (1980), and the basic goods promoted by human initiative.[7] Both of these approaches have generated important insights into the goals of public policy and the benefits and shortcomings of markets, and take us far into normative analysis free from smuggled-in assumptions about satiation, rationality, and revealed wellbeing.

For all the benefits of these approaches, one might find fault with the absolute value assigned to freedom in them. Although freedom is a crucial component of human dignity, rooted in creation, freedom is not the only basic good, and its goodness depends crucially on its connections to the other basic human goods. For example, freedom must be obedient to truth to be humanly good (John Paul II, 1993). It cannot be set against or above other basic goods like friendship, religion, beauty, and life itself, if it is to be a genuine benefit. Although Sen certainly admits that freedom owes something to truth, it is conceivable that freedom can work to the detriment of the person. For example, freedom which is granted to a young adult too soon, before he has the character to take full responsibility

for himself, can lead to a sequence of choices which shrinks the set of functionings achievable later on in life. Similarly, policy analysts should not be indifferent to conditions which foster widespread abuses of freedom (drug abuse, pornography) if those abuses are preventable, since they may in fact restrict the person's freedom to choose well.

A third approach attempts to incorporate a more complex account of human choice and wellbeing into normative analysis. To incorporate satiation more fully into normative analysis will entail some mathematical modeling, which of course will involve some simplification. Careful modeling of more complicated accounts of human decision making can highlight the normative stakes in our positive assumptions. The work of Gruber and Koszegi (2001), incorporating time inconsistent preferences into a normative model of taxation, is an excellent example: time inconsistency, by introducing internal costs of consumption which are not taken into account fully by the consumer, can justify significantly higher excise taxes than simple externalities (see Yuengert, 2006, for a discussion of the normative implications of this literature).

Other examples of recent research which incorporates more complex models of wellbeing into normative work include Frank (1999) and Easterlin (2006). In Frank (1999), utility functions are given a social aspect through the introduction of comparison points: the utility of consumption for a subset of goods is dependent on the average consumption of others. For example, a 2000 square foot house generates more utility when others have 1500 square foot houses than when others have 2500 square foot houses. This interdependence of utility results in prisoners' dilemmas in consumption. Easterlin (2006) incorporates adaptation in consumption: humans become used to higher levels of consumption. As a result, higher levels of consumption do not necessarily improve wellbeing.

The behavioral economics literature also offers accounts of human behavior that do not assume revealed wellbeing. This literature offers a toolbox of concepts—framing effects, adaptation, prospect theory, loss aversion, and interdependent preferences—which introduce a disconnect between preference and wellbeing (Camerer, Loewenstein, & Rabin, 2004; Sobel, 2005; Kahneman, 2003). Although the behavioral literature is agnostic about true wellbeing, it at least does not claim that the preferences which drive behavior are strictly related to wellbeing. Consequently, it is potentially fruitful ground for developing more complex normative analyses.

Although explicit mathematical treatments of the preference-wellbeing disjunction can enrich our normative analyses, there are limits to formal,

mathematical approaches. Although for the purpose of discussing the preference-wellbeing disjunction in section two we assumed the existence of a wellbeing function w(X), this function may not in fact exist. Even if observed choice satisfies completeness and transitivity, implying that the function u(X) exists, a wellbeing-based ordering may not exist. The basic goods themselves which ground human wellbeing—religion, life, friendship, for example—may be far less amenable to measurement than consumption goods. Even if these goods are measurable, it is doubtful that a single-valued wellbeing function could be constructed from them, since preferences over them are almost certainly incomplete. Consequently, any mathematical treatment of wellbeing will be necessarily simplistic; there may be some value in this, since it allows a preference-wellbeing disjunction to be at least incompletely adopted in a normative analysis, but it will leave some important issues (like incomplete preferences) unaddressed.[8]

5 Conclusions

Economists are often puzzled at the charge that their positive analysis of consumer behavior conceals normative claims. Much of this puzzlement comes from a failure to take the distinction between positive and normative seriously enough. The choices economists make in constructing models of consumer behavior, however vindicated by predictive or explanatory success, are not justified as normative choices by their positive virtues. If positive models can abstract from the reality of human nature and choice without serious consequence for prediction and explanation, the same cannot be said of normative models. Normative models must take the realism of their assumptions more seriously, since they are supposed to address the benefits and costs of policy to real people.

It is this greater need for realism in normative models that creates a conundrum for Christian economists. The Christian tradition could not be clearer on the real condition of consumers: consumers do not always choose in their own interests; sometimes they aware of their poor choices and are unable to change, and sometimes they do not recognize the disjunction between what they "want" and what makes them happy. If normative analysis is to be about real people—if it is to be anything except a sterile blackboard exercise—then Christian economists must take the possibility that real people's decision preferences may be distorted. If real people are not always made better off by more things, or if they choose more or less than is good for them, then normative analysis should not automatically assume that choice provides an acceptable metric of value.

The mathematical difficulties inherent in developing a full account of consumer behavior and wellbeing are symptomatic of the need for economists to become philosophical when addressing normative issues. Economists are loath to become philosophical, from a contempt for the "lack of rigor" of philosophy, and a despair that anything can be resolved through philosophical discourse. This view of philosophy is ignorant and parochial. The perceived lack of rigor (defined as a lack of mathematical precision) in many philosophical accounts of human choice and wellbeing is not due to the lack of mathematical training among philosophers; on the contrary, the lack of precision is due to the nature of the subject. These matters are too complex to be fully captured by the mathematics of optimization; any account which hopes to be comprehensive must go beyond optimization and formal mathematics. Even though one must always be careful and rigorous, one cannot always be quantitative.

Economists cannot retreat to mathematical approaches to human choice, justified in purely positive terms, when they are on normative terrain. The rules of good normative analysis are different: realism counts, and there are some crucial human realities that cannot be captured by the economic method. As we have seen, an attempt to take the preference-wellbeing disjunction seriously raises issues of freedom, character, and the true nature human goods in society. The language of public policy cannot ignore these concepts and the challenges they present. The positive tools of economics can only go so far in addressing them. They must be addressed in philosophical terms. In claiming that more is better, or that consumer preferences and choices are normative, economists are taking positions in philosophical debates, without reflection, without justification, but unaware that they are "doing philosophy."

Endnotes

1 For a careful reading of Newman's critique, see Oslington (2001).
2 For an exhaustive treatment of the topic of riches in the Bible, see Blomberg (1999).
3 It should be noted that many proponents of more realistic approaches to economic modeling argue that they improve *positive* prediction (Hausman, 1992, 2001). Behavioral approaches are most often promoted as alternative positive approaches (see Camerer & Loewenstein, 2004); this is consistent with the discipline's commitment to the positive-normative distinction, which forces normative approaches to prove themselves on purely positivist grounds.

4 We need not assume that a person's wellbeing can be represented as a function; the critique of the representation of preferences in a utility function applies to wellbeing as well. The specification of w(X) is simply a heuristic.
5 There is a growing literature on the realism of assumptions that promotes more realistic assumptions on the basis of positive economics. See Leplin (1984), Hirschman (1984), and Hausman (1992) for theoretical discussions of this point. See Thaler (1981), Gruber and Köszegi (2001), and Della Vigna and Malmendier (2004) for specific examples.
6 The analysis of bliss points inside the budget set begs the question of how prices can arise that result in affordable bliss points. Aumann and Dreze (1986) and Mas-Colell (1992) incorporate satiation into a general equilibrium framework. The existence of competitive equilibria can be preserved by a set of "dividends"—payments from sated agents to those who are not sated. Kajii (1996) introduces money into general equilibrium to preserve competitive equilibrium with satiation.
7 Basic goods, according to Finnis (1980), are goods which are valued absolutely, and not as means to some other end. Finnis claims that these goods are common across human beings and cultures. His list includes life, friendship, beauty, truth, religion, play, and practical reasonableness.
8 Economic theory has addressed the implications of incompleteness and intransitivity. Aumann (1962) and Border (1984) incorporate incompleteness and intransitivity in utility theory and general equilibrium.

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