



ELSEVIER

Journal of Socio-Economics 33 (2004) 329–341

The Journal of  
Socio-  
Economics

www.elsevier.com/locate/econbase

# Rationality, integrity, and religious behavior

Metin M. Coşgel\*, Lanse Minkler

*Department of Economics, The University of Connecticut, Storrs, CT 06269-1063, USA*

---

## Abstract

Borrowing insights from philosophical discussions on the concept of integrity, we propose a framework to understand religious behavior in consumption, production, and exchange. Whereas previous economic explanations of religious behavior have focused on preferences, opportunity sets, or social pressure, we emphasize the notion of integrity defined as identity-conferring commitments. We provide a framework that not only introduces commitment and identity but includes previous explanations as special cases. We also discuss extensions of the framework in addressing the multiplicity of the dimensions of identity.

© 2004 Elsevier Inc. All rights reserved.

*JEL classification:* Z12; A13; A12; B41; D11

*Keywords:* Integrity; Rationality; Commitment; Identity; Religious behavior

---

## 1. Introduction

Religions typically prescribe distinct behavior in consumption, production, and exchange. Well-known are the examples of Catholics not eating meat on Fridays during Lent, Hindus being vegetarian and Muslims and Jews avoiding pork, Muslims praying five times a day, and Jews and Christians observing the Sabbath. As a common theme in these examples, individuals are asked to commit to a behavioral pattern by consistently choosing one course of action over its alternatives and not to deviate from the pattern even as circumstances (e.g. prices, cost, endowment) change. Although some followers of a religion may not be observing a prescribed behavior strictly and there may be some nonreligious individuals who might also be displaying the same pattern, that all followers typically observe the same pattern but with varying levels of compliance nevertheless suggests a source of behavioral commitment emanating from religious belief.

---

\* Corresponding author. Tel.: +1-860-486-4662; fax: +1-860-486-4463.

*E-mail address:* cosgel@uconn.edu (M.M. Coşgel).

Economists tend to approach this type of behavior in one of two general ways. The first is to view religious behavior as being less rational or outright irrational and thus outside of the domain of economics. An alternative approach that has recently grown in popularity has been to provide explanations grounded in standard economic theory. These explanations typically apply economic concepts and models by viewing believers as rational consumers and religious organizations as clubs or firms that collectively constitute a religious market. Supply side factors like differences in opportunity sets, demand side factors like distinct preferences of believers, or social factors like peer-pressure have been variously proposed to explain distinct behavior.<sup>1</sup>

We advocate a different approach in this paper by borrowing insights from other disciplines, particularly from philosophy. Identifying the weaknesses of previous economic explanations, we offer an alternative explanation that relies on the notion of integrity defined as identity-conferring commitments. Commitment to religious principle is central in the formation of religious identity. We provide the sketch for a formal framework that not only includes commitment and identity, but that also nests all of the other explanations for religious behavior. We then extend the framework to address the issue of multidimensional identity as in the case of competing demands on being, for example, a parent, worker, and believer. This extension offers new insights but also raises new problems in thinking about what it means for one to be a person of integrity.

## 2. Economic explanations of religious behavior

To examine economic perspectives on religious behavior, consider the example of well-known prohibition against the consumption of pork in both Judaism and Islam.<sup>2</sup> Whenever offered a choice between fish and pork, Jews and Muslims are supposed to choose fish over pork on religious grounds. In reality, however, the observed behavior may display great variety, ranging from total disregard of this dietary restriction to total abstention from the consumption of pork. While devout Jews and Muslims may observe the prohibition strictly, others may occasionally consume products like hot dogs that include pork, and still others may turn out to be fans of roasted pork loin and choose pork over fish.

Whereas, economists have historically stayed away from debates involving religion, some economists have recently sought to expand the domain of economics to religious behavior and institutions.<sup>3</sup> Economic approaches to explaining religious behavior can be divided into three groups. The first type of explanations emphasize the demand side and investigate the way religious beliefs shape preferences and choice. For example, viewing preferences as being shaped by the social and cultural environment, one might explain the choice of fish over pork as simply an instance of choice that follows from preferences shaped predominantly

---

<sup>1</sup> See Iannaccone (1998) for a review of this literature.

<sup>2</sup> For the historical roots of the prohibition of pork, see Lobban (1994).

<sup>3</sup> Economic approaches to religion actually go back to Adam Smith (Anderson, 1988). For a review of the relationship of religion to economics in intellectual history, see Welch and Mueller (2001). For examples and reviews of the recent literature on economics and religion, see Iannaccone (1998) and the contributions on the 1994 special issue (vol. 150, no. 4) of *The Journal of Institutional and Theoretical Economics*.

by religious considerations.<sup>4</sup> Preference based explanations of religious (or other types of) behavior, however, have been controversial. Little is said to be known about the formation of preferences, and preference-based explanations are criticized as being speculative and unconvincing. What does it mean, for example, for someone who has never tasted pork in his or her life to form complete preferences over it?

The second economic approach to explaining religious behavior is based on the [Stigler and Becker \(1977\)](#) view of tastes and preferences as being stable over time and similar among people, implying that behavioral differences are caused by differences in prices and incomes only. Applying this view to religious behavior, [Iannaccone \(1995, p. 77\)](#) argues: “the rational choice theorist is almost never content to explain [changes in religious behavior] with reference to changed tastes, norms, or beliefs.” Rather than focus on differences in preferences, Iannaccone and others have thus focused on differences in opportunity sets to explain religious behavior. For example, dietary restrictions like the prohibition of pork can be viewed as examples of religious norms that constrain the behavior of members of religious groups in order to alleviate various externality problems (such as to monitor participation) that such groups are likely to face ([Iannaccone, 1992](#)). These norms affect behavior not by shaping the preferences but by restricting the opportunity set and making it costlier to choose the alternatives. The problem with this type of explanations of behavior, however, is that these constraints are not always binding. In the United States, for example, both fish and pork are easily available in stores, and the existence of a dietary restriction on pork does not by itself guarantee that Jews and Muslims will not consume it, especially in private. Without an explanation for why an individual observes the prohibition on pork, it is difficult to explain his or her choice of fish over pork solely by restrictions on the opportunity set.

The third approach seeks to explain religious behavior by social pressure on choice, emphasizing the way our choices are made in social settings and influenced by the social environment. [Kuran’s \(1990\)](#) work on preference falsification, for example, gives various examples of the way social pressure might cause an individual to choose differently in public than in private.<sup>5</sup> Even though one might prefer pork over fish as a matter of taste, one might still choose fish under social pressure, for example to avoid being ostracized by others if seen eating pork. Although the emphasis on social pressure might explain how religious behavior might differ between public and private settings, it does not explain why some individuals give in to social pressure and other do not. Some individuals choose to never eat pork, even when alone. Others choose to eat pork and violate other religious rules even in the company of others. The consistency of such behavior between private and public settings indicates that social pressure alone cannot explain religious behavior.

The limitations of the three types of economic approaches can be seen in explanations of other examples of religious behavior. Consider the allocation of time to worship and prayer. Supposing leisure and worship as being the only activities available, we can easily construct economic arguments for how people choose between them. The explanation of religious behavior based on distinct preferences would suggest that, given their religious

---

<sup>4</sup> For the determination of preferences and religious choices, see [Bowles \(1998\)](#), [Coşgel \(1994\)](#), [Douglas and Isherwood \(1979\)](#), [George \(2001\)](#), [Granovetter \(1985\)](#), [Hausman and McPherson \(1994\)](#), [Kuran \(1994\)](#), [McPherson \(1983\)](#), and [West and McKee \(1983\)](#).

<sup>5</sup> See also [Coşgel \(1994\)](#) for audience effects that influence behavior.

upbringing and associated forms of worship, individuals have been socialized into receiving utility from worship and prayer. Muslims would thus rather pray five times a day, as a matter of preference, than spend the same time for leisure, and similarly Jews and Christians have a preference for going to Synagogue or Church over leisure. Although this approach might be useful to explain participation in some types of worship activities like singing and dancing, it fails to account for others, such as fasting, that appear to function precisely by reducing utility. It seems far-fetched to explain fasting as a preference-maximizing behavior. Alternative explanations emerge from supply side arguments and those emphasizing social pressure. For example, whereas the supply side arguments might explain why people attend Church or Synagogue services by focusing on the restrictions imposed on alternative activities on the Sabbath, arguments based on social pressure might emphasize the way individuals attend services in order to meet the expectations of friends and family members. These explanations also fail, however, because most restrictions on the Sabbath are non-binding and can be avoided at little or no cost, and individuals often continue to attend services even when no social pressure is absent, such as during vacation elsewhere. For a satisfactory explanation of religious behavior, we need to go beyond preferences, opportunity sets, and social pressure.

### 3. Integrity

To contribute to the discussion and understanding of religious behavior, we rely on philosophical insights on integrity. At its coarsest level, a person of integrity can be thought of as one who is honest and of character. Philosophers probe deeper. For instance, the *Oxford Companion to Philosophy* puts it this way:

To have integrity is to have unconditional and steady commitment to moral values and obligations. For such a person, the fundamental question whether to conduct life on the plane of self-concern or of moral seriousness has been decisively resolved, though particular life situations will doubtless continue to put that commitment to strenuous test. This moral commitment becomes a crucial component in his or her sense of identity as a person: it confers a unity of character. . . . (*Oxford Companion to Philosophy*, (1995) p. 410)

The notion of integrity we adopt is based on a body of research that emphasizes the roles of commitment and identity for human behavior and interaction.<sup>6</sup> Although Sen (1977) was one of the first to introduce economists to the notion and importance of commitment, the relationship between commitment and identity have not been explored by economists.

There are two requirements necessary for an individual to have integrity. The first is that he or she must have commitments. Commitments are internal requirements or constraints imposed on one's own self.<sup>7</sup> What sorts of things could someone be committed to? Bernard

<sup>6</sup> For an analysis of the sociology of identity and how it can affect economic outcomes, see Akerlof and Kranton (2000).

<sup>7</sup> See, for instance, Halfon (1989), Harcourt (1998), and Minkler (1999). Frank (1987) provides an account of how emotions serve as signals to solve the commitment problem in games of cooperation. Burke and Reitzes (1991) apply the identity approach to commitment in social psychology. Coşgel (2001) quantitatively examines the determinants of religious commitment.

Williams suggests, “One can be committed to such things as a person, a cause, an institution, a career, one’s own genius, or the pursuit of danger.” (Smart and Williams, 1973, p. 112) Others, like McFall (1987), focus on personal and moral principles.

The second requirement is that these commitments define a person’s identity. Virtually all philosophers who write on the subject concur that the commitments required by integrity must also be inextricably linked to one’s own identity. That means that if one violates a commitment, say to temptation, one loses a sense of self. Utterances like “I could never do that” or “I couldn’t live with myself if I did that” reflect the view that a committed person could not do “that” and remain the person they wish to be (Korsgaard, 1994). Such a loss would be fundamental; it cannot be formulated as simply a loss in utility.

Taken together, these requirements indicate a definition of integrity as identity-conferring commitments (McFall, 1987). Before we apply this definition in economic analysis and examine its implications for religious behavior, we present some further observations on the philosophical discussions of commitment and integrity that should further clarify these notions for economists.

Commitments are different from preferences. Being committed might prevent one from choosing preferred actions. Whereas, economists consider preferences as exogenously determined desires, commitments are the product of conscious reflection.<sup>8</sup> The distinction is crucial because the aim of economic man is to expeditiously fulfill desires in order to achieve maximal happiness, while a committed individual need not have such a primary goal. Recent work in social psychology suggests that well-being includes more than just happiness; it also includes meaning (McGreggor and Little, 1998). Whenever commitments and desire conflict, the person of integrity is obligated to choose in favor of the former.<sup>9</sup>

McFall (1987) distinguishes between personal and moral integrity. A person of personal integrity must uphold commitments against temptation for personal principles, so that there is coherence between actions and principles. Someone who puts art above all else may thus have personal integrity. Moral integrity requires personal integrity, but also that the commitments must involve moral principles (e.g. “don’t lie”). However, which moral principles qualify is somewhat problematic. A person of moral integrity must adhere to moral commitments for what he or she considers to be the right reasons, even if those reasons are suspect. Because specifying the correct moral principles in advance for every conceivable context can be problematic (impossible), Halfon (1989) suggests in the spirit of Aristotelian virtue ethics that a person of integrity simply be committed to “do what’s best.”

If one promises to suffer a loss of the most fundamental kind, one’s own identity, by breaking a commitment, why would someone ever do so? Stated differently, why wouldn’t everyone enjoy unlimited integrity? We can think of three reasons.<sup>10</sup> First, some people may not see the importance of identity-conferring commitments. Both the popular culture and the economist’s approach to human behavior have propagated the notion that well-being consists solely in fulfilling desires. Some preference-satisfiers may even feign adhering to

<sup>8</sup> For many philosophers like Kantians, the source of this conscious reflection is a free will.

<sup>9</sup> This conflict can be modeled to generate economic insights. Minkler and Miceli (2004) take integrity to be exogenously but differentially endowed to show that when all agents promise to cooperate, some would not, but some will in contraposition to their material interests.

<sup>10</sup> The second and third points come from McFall (1987).

commitments in order to gain whatever else they desire. Second, some may wish to adhere to their own commitments but cannot because of weakness of will. Such people might succumb to desire but sincerely wish they had the ability not to. And third, some may break their commitments by rationalizing their actions, or by mentally changing their commitments for reasons of expedience but not recognize it as such. These are cases of self-deception.

We make two final points on integrity. First, integrity has been famously used by Bernard Williams to add yet another nail into utilitarianism's coffin (Smart and Williams, 1973). As we have emphasized, integrity requires adherence to one's own commitments (or projects). But utilitarianism requires one to treat one's own projects as just one set among many, and therefore a utilitarian is often compelled to violate his or her own projects in order to fulfill those of someone else. Thus, utilitarianism cannot coherently include integrity.<sup>11</sup> Secondly, while it is possible for someone else to violate one's dignity, only the person's own self can violate his or her own integrity (Halfon, 1989). Each of us, and each of us only, are responsible for our own integrity.

#### 4. Identity, commitment, and religious behavior

We now consider these ideas more formally. We begin with the simple case of a single identity for each individual, assumed to be exogenously determined. To focus on religious behavior, we only consider religious identities, such as Jewish, Muslim, Catholic, Hindu, Lutheran, and so on. Of course, one could also be an atheist, follow lesser-known religions, or even have distinct personal religious beliefs.

Let  $\mathbf{a}$  denote an action vector taken by an individual and  $A$  be the set of all available actions. All individuals have well-behaved preferences that obey the usual assumptions so that each individual has a unique utility-maximizing choice, denoted by  $\mathbf{a}^*$  (that is,  $\mathbf{a}^*$  solves  $\max U(\mathbf{a})$  subject to  $p \times \mathbf{a} \leq I$ , where  $p$  denotes prices and  $I$  income).  $\mathbf{a}^*$  thus represents the action vector chosen based solely on personal preferences and without any consideration of identity or commitment.

Religious considerations are formulated as follows. Each religion prescribes either unique actions, denoted by  $\bar{\mathbf{a}}$ , or no specific actions, in which case individuals are free to do as they please, which simply means to choose  $\mathbf{a}^*$ . The final choice, however, depends on religious commitment and integrity. Each individual has a level of commitment to his or her given religious identity (be it Jewish, Muslim, etc.), denoted by  $c$ . Recall that  $c$  is the product of conscious reflection and is not otherwise determined. Assume for simplicity that  $c \in [0, 1]$  and that a higher value of  $c$  means a higher level of commitment. Applying the notion of identity discussed above, we can thus view  $c$  as the level at which commitments confer identity. Thus, high  $c$  is associated with high integrity.

Given an individual's religious identity and the corresponding  $\bar{\mathbf{a}}$ , the level of commitment  $c$ , and the utility maximizing choice  $\mathbf{a}^*$ , he or she would choose a final action, denoted by  $\hat{\mathbf{a}}$ , such that

$$\hat{\mathbf{a}} = c\bar{\mathbf{a}} + (1 - c)\mathbf{a}^*. \quad (1)$$

<sup>11</sup> Harcourt (1998) extends the argument by suggesting that commitments, the core of integrity, are fundamentally at odds with utilitarianism and its reliance on preferences.

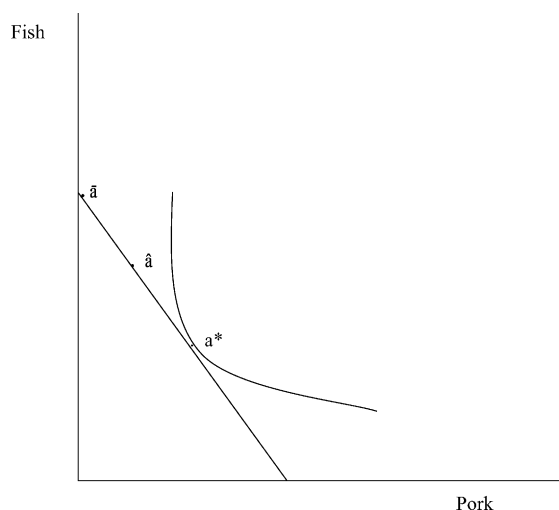


Fig. 1. The choice of pork and fish.

It is easy to see the choices corresponding to the extreme cases of individuals with  $c = 0$  (no commitment) and  $c = 1$  (total commitment). The first is the type of individual who has no commitment to his or her religious identity and thus places no weight on religious prescriptions in choosing an action. As a result,  $\hat{a} = a^*$ . Put differently, this is the type of individual considered typical in standard theory of rational choice in economics. The second is the case of an individual totally committed to a religious identity and chooses actions based solely on religious considerations, so  $\hat{a} = \bar{a}$ . Individuals with  $0 < c < 1$  would display behavior of varying degrees of integrity that shows a compromise between utility maximization and religious prescriptions.

To illustrate, let us apply this setup to examples discussed above. In the example of dietary choice,  $\bar{a}$  would be to eat fish for a Jew, a Muslim, and a Catholic on Fridays during lent. For those with no specific restrictions,  $\bar{a} = a^*$ . Suppose in the absence of religious considerations individuals have convex preferences between pork and fish, in which case  $a^*$  would include positive amounts of both fish and pork. By contrast, the final choice in our analysis depends on  $c$ . For example, a totally committed Jew ( $c = 1$ ) would choose fish only ( $\hat{a} = \bar{a}$ ), while one in name only ( $c = 0$ ) would choose  $a^*$ . Commitment levels between 0 and 1 would mean a partial observance of the religious prescription by including some pork in the diet. Fig. 1 shows these possibilities graphically.

Fig. 2 similarly shows the example of the allocation of time between worship and leisure. Suppose a religion prescribes an allocation at  $\bar{a}$ , which includes some leisure and a high level of worship activities like performing personal prayers and attending weekly services. Suppose also that the utility maximizing allocation for an individual is at  $a^*$ , with more leisure and less worship than that at  $\bar{a}$ . By choosing  $\hat{a}$  as shown, this individual is displaying a level of commitment strictly between 0 and 1. An example of this type of an individual would be someone who occasionally chooses to play golf over attending the weekly service.

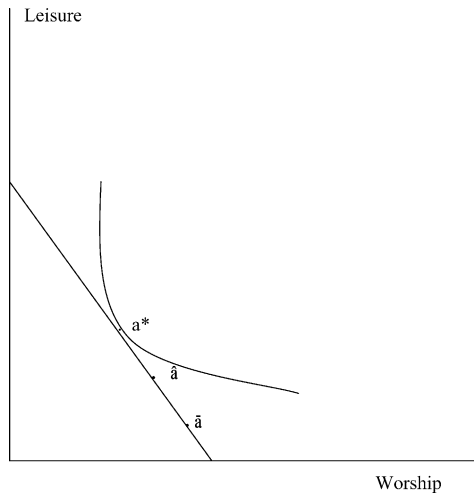


Fig. 2. The choice of worship and leisure.

## 5. Previous explanations and their limitations

We can now use the analysis to put previous arguments about religious behavior into a unified framework. Recall that preference based arguments would typically view individuals as being conditioned to choose prescribed actions strictly as a matter of preference, which with our notation means  $\mathbf{a}^* = \bar{\mathbf{a}}$ . Based on this assumption, these arguments suggest  $\hat{\mathbf{a}} = \bar{\mathbf{a}}$  because utility maximization requires  $\bar{\mathbf{a}} = \mathbf{a}^*$  always, by assumption. We get the same result, but for a different reason. In our analysis  $\hat{\mathbf{a}} = \bar{\mathbf{a}}$  because (still assuming  $\mathbf{a}^* = \bar{\mathbf{a}}$ ),  $\hat{\mathbf{a}} = c\bar{\mathbf{a}} + (1 - c)\mathbf{a}^* = \mathbf{a}^*$  for all  $c$ . In this case, the standard neoclassical result is nested in our analysis including commitment.

Supply side arguments would view individuals as choosing prescribed actions not as a matter of preference but because the alternatives are not available. With our notation this means to assume a restricted action set,  $A^r$ , such that  $\mathbf{a}^* \notin A^r$  and that in extreme cases perhaps even  $\hat{\mathbf{a}} = \bar{\mathbf{a}}$ . For example, the sale of pork may be prohibited in Islamic countries, so individuals would have no choice but not to eat it (and thus eat only fish in the above example). Our analysis also includes that possibility, but additionally one could choose not to eat pork because of religious commitment regardless if the supply constraint is binding. As long as  $\bar{\mathbf{a}} = A^r$ , the alternative reason one might choose  $\bar{\mathbf{a}}$  is because  $c = 1$ .

Finally, explanations that emphasize social pressure can be formulated in our analysis as implying the presence of some social cost to deviating from the prescribed action: a disutility, denoted by  $d$ , whenever  $\hat{\mathbf{a}} \neq \bar{\mathbf{a}}$ . Regardless of  $c$ , the individual may thus choose  $\hat{\mathbf{a}} = \bar{\mathbf{a}}$  because  $u(\mathbf{a}^*) + d \leq u(\bar{\mathbf{a}})$ .

The final choice in these arguments is guided directly by the distinct preferences of religious people, constrained by the available opportunities, or dictated by social pressure. Although we do not deny that any one of these reasons could indeed be the reason in some contexts, we nevertheless argue that such explanations fail to explain observed behavior in all

cases. Individuals often follow the religious prescription even when it demands preference falsification ( $\hat{a} \neq a^*$ ), alternatives are readily available ( $a^* \in A$ ), and social pressure is absent ( $d = 0$ ). For example, although the presence of distinct preferences might explain the case of a Catholic who goes to church every Sunday only because he or she truly enjoys the experience, it does not explain why the same person would observe the lent (thus, avoid a preferred item). It similarly does not explain why Muslims fast from dusk until dawn during the month of Ramadan. The supply side explanations similarly fail to explain why a Jew, who would rather (strictly as a matter of preference) go shopping on a Saturday, ends up going to the Synagogue even when the malls are open (thus no restriction on the opportunity).

Our emphasis on integrity also identifies a significant failure of the explanations of religious behavior based on social pressure. These explanations generally fail to explain why people display the same behavior when no one else is present to observe. There is, of course, an important social component to religious behavior, which we do not deny. It is indeed possible that someone might attend the weekly service to prevent his nosy neighbor from spreading rumors, or two Muslims might avoid pork and alcohol in a restaurant while eating together. These do not explain, however, why an individual would attend the service even when the neighbors are on vacation, or perhaps most fundamentally, why a Muslim would avoid pork and alcohol even when dining alone at home.

Rather than external pressure or restricted opportunities, we emphasize factors that are internal to an individual as influencing the choices of actions. Moreover, rather than confining internal influences to the realm of preferences, we emphasize integrity and commitment. Note, however, that emphasizing commitment is not the same as arguing that individuals always follow religious prescriptions. Between the extremes of an individual depicted by the standard choice theory ( $c = 0$ ) and a totally committed individual ( $c = 1$ ) is the (majority of?) population who for one reason or another have chosen an intermediary level of commitment to their religious identities.

## 6. Multidimensional identity

We now generalize the analysis by considering identity as a multidimensional concept. Each individual exists in the world not only as a religious believer but also possibly as a parent, worker, friend, spouse, activist, and so on, which jointly constitute his or her identity and sense of self.<sup>12</sup> Specific dimensions of each person's identity would of course be determined by such things as biological characteristics and social environment. Someone could be a 30-year-old Catholic male, single, and working as an engineer in a local factory, while someone else could be a 40-year-old Southern Baptist, female, married with two children, and unemployed. Although an individual may be able to choose many of these dimensions, such as whether to be married and have children, we assume below that one's identity is exogenously determined. The choice of these dimensions is certainly an important subject, but outside the scope of this paper. We assume identity is given, in order to keep the analysis simple and focused on commitment.

<sup>12</sup> For similar multiplicities of identities in economic models, see Elster (1986) and Kuran (1990).

Let  $\mathbf{a}^*$  denote utility maximizing actions as before. Identity considerations are formulated as follows. Suppose there are  $n$  dimensions to one's identity. Corresponding to dimension  $j$  is a prescribed action set denoted by  $\bar{\mathbf{a}}^j$ , which for simplicity we assume to be unique and public knowledge. For example, as workers we are expected to devote a certain amount of our time to work; as parents we are expected to spend a certain amount of time with our children, and as believers we are expected to allocate time for worship and prayer. Each of these dimensions clearly indicates a different prescribed allocation of our time between work, leisure and worship.

Given the dimensions of an individual's identity and the corresponding prescribed actions, he or she chooses a level of commitment, denoted by  $c^j$ , to each dimension  $j$ .  $\mathbf{c} = [c^1, c^2, \dots, c^n]$  thus has the important component of deciding how much of our resources and attention to devote to each dimension, based on our overall purpose in life and the kind of person we would like to be. The notion of integrity adopted here views  $[c^1, c^2, \dots, c^n]$  as the set of commitments that confers one's identity and sense of self.

Because of scarce time and resources, we may not be able to fully commit to all dimensions of our identity. To formalize this constraint, we interpret  $c^j$  as showing the relative weight attached to identity  $j$ , higher values of  $c^j$  indicating higher levels of commitment. Put differently

$$\sum_j c^j + s = 1,$$

where  $s$  is the weight attached to the self that places no consideration on identity.

Identity considerations affect the final choice of an action as follows. Given the prescribed actions for each identity  $\bar{\mathbf{a}}^j$ , the commitment vector  $\mathbf{c}$ , and the utility maximizing choice  $\mathbf{a}^*$ , an individual chooses final actions, denoted by  $\hat{\mathbf{a}}$ , such that

$$\hat{\mathbf{a}} = \sum_j c^j \bar{\mathbf{a}}^j + s \mathbf{a}^*. \quad (2)$$

Extreme cases of individuals with  $c^j = 0$  (no commitment) and  $c^j = 1$  for some identity  $j$  (total commitment) are similar to those discussed earlier in the simpler analysis with a single (religious) identity. The first is an individual who places no weight on a certain dimension of his or her identity, which would be the case, for example, if a father imposes no internal requirement on himself to contribute to his children's upbringing and thus devotes no time or resources for that purpose (unless it happens to coincide with his preferences). By contrast, the second is the type of an individual exclusively committed to a certain identity, such as would be the case when someone commits his or her life to a religious cause (e.g. an imam, rabbi, or priest) and spends all of his or her time for this cause, so that  $\bar{\mathbf{a}}^j = \hat{\mathbf{a}}$ . For any  $\bar{\mathbf{a}}^j \neq \hat{\mathbf{a}}$ ,  $c^j$  is less than its required level. That could happen either because the individual does not feel entirely committed to the principle underlying the action, or even if he does he does not have time or resources because of competing identities and their obligations. Note also the case of  $\sum_j c^j = 0$  (or  $s = 1$ ), in which case an individual places no weight at all on identity considerations in choosing an action. As a result  $\hat{\mathbf{a}} = \mathbf{a}^*$ , displaying the type of behavior considered typical in standard theory of rational choice in economics.

## 7. Extensions and related issues

Recognizing the multidimensionality of identity shows the limitations of considering integrity as a one-dimensional concept. Previous discussions of integrity consider it as being either present or absent in an individual. For instance, recent economic formulations of integrity consider it as a continuum, but still in one dimension (Minkler and Miceli, 2004). It is easy to see that these are special cases of the analyses developed above. The formulation of integrity as a single dimensional continuum is in some sense identical to the simple analysis presented earlier for the special case of a single (religious) identity for each individual. Integrity in that context was a matter of making commitments that confer identity, formalized by the level of  $c$ . Similarly, considering integrity in the more limited sense of being either present or absent would be the same as formulating  $c$  as a binary variable that allows only two choices to individuals: to commit or not to commit to identity. Although both of these formulations can certainly be useful, we have to recognize their limitations in making general observations. Unless we can somehow produce a metric that can measure  $[c^1, c^2, \dots, c^n]$  as a single quantity, we have to be careful about making general statements about integrity in a broader sense. We can easily imagine someone who is a committed spouse but a lousy believer. Philosophers insist that integrity requires coherence: consistency among one's commitments and consistency among commitments and actions. But even if one holds consistent commitments, the resource constraint posed by competing identities might mean that an otherwise sincere and committed person cannot consistently fulfill some of his obligations. Absent criteria to prioritize and quantify the "values" of different dimensions of identity, we simply have no way of assigning a single level of integrity to these individuals. We may be left with Halfon's (1989) characterization of a person of integrity as simply being committed to "doing what's best."

Considering identity as a multidimensional concept allows us to examine the relationship between the religious dimension of our identities and other dimensions. The alternatives to the religious dimension of our identities can be divided into two general categories. The first is the "utility maximizing" self, whose choice of  $a^*$  was formalized in the analysis as receiving the weight  $s$ . As discussed earlier, economic models typically consider this as the only relevant dimension of our selves, so  $s = 1$  corresponds to the type of behavior considered typical in standard theory of choice. It is well known that economists typically consider the satisfaction of one's own preferences as the *only* motivation for choice. Even alternative motivations, such as one's concern for the well-being of others, are modeled as a matter of preference, as somehow being part of one's own utility function. Although we do recognize that preference satisfaction is a motivation for choice, we also include and emphasize commitment, thus permitting a fuller characterization. Thus,  $s$  represents the degree to which we yield to the part of our selves exclusively concerned about the maximization of utility, regardless of its contents. Put differently,  $s$  is the degree of self-interest.

The second category of alternatives to the religious dimension is the other dimensions of integrity in our identity. There are certain parallels between our analysis and the models of consumption choices that suggest a useful analogy to characterize the relationship between two dimensions of integrity. Just as two goods can be substitutes and complements, two

dimensions of integrity can substitute or complement each other. For example, there are numerous elements of being a parent and a religious believer that make them complementary to each other. Being a committed believer and a committed parent often go together, such as for parents who view teaching religion to their children and taking them to religious activities as essential components of parenthood. By contrast, being a worker and a religious believer are often substitute dimensions of one's identity. A Muslim has to take time off from work to be able to attend the Friday prayer, and a workaholic Christian cannot work on Sunday without violating the rules for the Sabbath.

Distinguishing between substitutes and complements provides a way to examine how changes in other dimensions of our lives can affect our religious commitment and behavior. We can view this in two ways. The first is within a static, "partial equilibrium" framework, where a *given* change in the commitment level of another dimension can cause religious commitment to change. For example, the complementarities between parenthood and religiosity indicate that one might become more religious upon having a child. Similarly, one might be less religious after being promoted at work to a position that demands a higher level of commitment.

The other way to examine changes in commitment levels is in a "general equilibrium" framework that considers the overall interdependence between the levels of commitment in a dynamic setting. For example, the individual who becomes more religious after having a child may in turn decide to have even more children, as some religions prescribe. Similarly, he or she may become less committed to work or take a less demanding job. Individuals typically seek coherence in their identity, which requires a stable equilibrium in commitment levels. "Externalities" between different dimensions of one's identity mean that an increasing commitment to one dimension would lead to higher levels of commitment in complementary dimensions and lower levels in substitute dimensions, until a new coherent identity is achieved at a new stable equilibrium.

Explicit formulation of integrity, identity, and commitment in an economic model would allow economists to provide fresh perspectives to well-known problems and pursue new areas of research. For example, one of the well-known problems in welfare economics is the distinction between preferences and beliefs as the basis for public policy (Hausman and McPherson, 1994; Sagoff, 1986). Whereas economists typically view preferences as "hard data" and prescribe policy based on them, we view this approach as being too simplistic because individuals choose how much weight to assign to their preferences, and superimposing a 100% weight ( $s = 1$ ) to their preferences is unwarranted. Note also that an integrity-based approach provides a different perspective on the literature of metapreferences (Sen, 1977) by showing the way identity-conferring commitments, rather than higher order preferences, determine our choices of preferences and actions.

Finally, the hardest task ahead is to find way to explicitly model the choice of commitments. The difficulty arises because commitments are the product of conscious reflection. While we treated commitments the same way an economist would treat preferences, namely as being exogenous, future efforts will need to open the black box. Whereas commitments, like preferences, may be significantly influenced by the interplay between genetics and social forces, they also involve free will and conscious reflection, which add a meta-physical dimension to the analysis.

## References

- Akerlof, G.A., Kranton, R.E., 2000. Economics and identity. *Quarterly Journal of Economics* 115, 715–753.
- Anderson, G.M., 1988. Mr. Smith and the preachers: the economics of religion in the wealth of nations. *Journal of Political Economy* 96, 1066–1088.
- Bowles, S., 1998. Endogenous preferences: the cultural consequences of markets and other economic institutions. *Journal of Economic Literature* 36, 75–111.
- Burke, P.J., Reitzes, D.C., 1991. An identity theory approach to commitment. *Social Psychology Quarterly* 54, 239–251.
- Coşgel, M.M., 1994. Audience effects in consumption. *Economics and Philosophy* 10, 19–30.
- Coşgel, M.M., 2001. The commitment process in a religious commune: the shakers. *Journal for the Scientific Study of Religion* 40, 27–38.
- Douglas, M., Isherwood, B., 1979. *The World of Goods*. Basic Books, New York.
- Elster, J., 1986. *The Multiple Self*. Cambridge University Press, Cambridge.
- Frank, R.H., 1987. If *Homo Economicus* could choose his own utility function, would he want one with a conscience. *The American Economic Review* 77, 593–604.
- George, D., 2001. *Preference pollution: how markets create the desires we dislike*. University of Michigan Press, Ann Arbor.
- Granovetter, M., 1985. Economic action and social structure: the problem of embeddedness. *American Journal of Sociology* 91, 481–510.
- Halfon, M., 1989. *Integrity: a philosophical inquiry*. Temple University Press, Philadelphia.
- Harcourt, E., 1998. Integrity, practical deliberation and utilitarianism. *The Philosophical Quarterly* 48, 187–198.
- Hausman, D.M., McPherson, M.S., 1994. Preference, belief, and welfare. *The American Economic Review* 84, 396–400.
- Iannaccone, L.R., 1992. Sacrifice and stigma: reducing free-riding in cults, communes, and other collectives. *Journal of Political Economy* 100, 271–292.
- Iannaccone, L.R., 1995. Voodoo economics? Reviewing the rational choice approach to religion. *Journal for the Scientific Study of Religion* 34, 76–88.
- Iannaccone, L.R., 1998. Introduction to the economics of religion. *Journal of Economic Literature* 36, 1465–1496.
- Korsgaard, C., 1994. The sources of normativity. In: Peterson, G. (Ed.), *The Tanner Lectures on Human Values*. Vol. 15. University of Utah Press, Salt Lake City.
- Kuran, T., 1990. Private and public preferences. *Economics and Philosophy* 6, 1–26.
- Kuran, T., 1994. Religious economics and the economics of religion. *Journal of Institutional and Theoretical Economics* 150, 769–775.
- Lobban Jr., R.A., 1994. Pigs and their prohibition. *International Journal of Middle Eastern Studies* 26, 57–75.
- McFall, L., 1987. Integrity. *Ethics* 98, 5–20.
- McGreggor, I., Little, B., 1998. Personal projects, happiness and meaning: on doing well and being yourself. *Journal of Personality and Social Psychology* 74, 494–512.
- McPherson, M.S., 1983. Want formation, morality, and some ‘interpretive’ aspects of economic inquiry. In: Haan, N., Bellah, R.N., Rabinow, P., Sullivan, W.N. (Eds.), *Social Science as Moral Inquiry*. Columbia University Press, New York, pp. 96–124.
- Minkler, L., 1999. The problems with utility: towards a non-consequentialist/ utility theory synthesis. *Review of Social Economy* 57, 4–24.
- Minkler, L., Miceli, T.J., 2004. Lying, integrity, and cooperation. *Review of Social Economy*, 62.
- Oxford Companion to Philosophy*, 1995. In: Honderich, T. (Ed.), Oxford University Press, Oxford.
- Sagoff, M., 1986. Values and preferences. *Ethics* 96, 301–316.
- Sen, A.K., 1977. Rational fools: a critique of the behavioral foundations of economic theory. *Philosophy and Public Affairs* 6, 317–344.
- Smart, J.J.C., Williams, B., 1973. *Utilitarianism: for and against*. Cambridge University Press, Cambridge.
- Stigler, G., Becker, G., 1977. De Gustibus Non Est Disputandum. *The American Economic Review* 67, 76–90.
- Welch, P.J., Mueller, J.J., 2001. The relationships of religion to economics. *Review of Social Economy* 59, 185–202.
- West, E.G., McKee, M., 1983. De Gustibus Est Disputandum: the phenomenon of ‘merit wants’ revisited. *The American Economic Review* 73, 1110–1121.