

Individual Differences in Religion and Spirituality: An Issue of Personality Traits and/or Values

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Personality, in terms of both strict personality traits (five factors) and their cultural adaptations (e.g., values), has systematically been found to predict religion. This article focuses on three issues that still remain unclear: predictiveness of personality facets versus the five factors; predictiveness of values versus personality; and similarities and differences between religiosity and spirituality in their associations with personality and values. We administered the NEO-PI-R, the Schwartz Value Survey, and religious measures to Spanish students (N = 256). The personality facets provided additional and subtler information than the five factors on individual differences in religion and spirituality. When the overlap between personality and values was controlled for, values were almost unique predictors of these differences. Spirituality shared with religion both a prosocial tendency (with even some intensification) and conscientiousness, but not the emphasis on conservation versus openness to change and to experience.

INTRODUCTION

Individual differences in religion have been consistently found to relate to personality, in terms of both strict personality traits (heavily influenced by genetics) and their cultural adaptations (e.g., values). Over the last 15 years, this research has focused on the dominant models of these two domains, the five-factor model of personality (Piedmont 2005; Saroglou 2002) and Schwartz's 10-value model (Roccas 2005; Saroglou, Delpierre, and Dernelle 2004). However, several issues still remain unclear and need to be addressed if we want to understand the exact status of the specific individual differences characteristic of religion. First, given the fact that each of the five personality factors includes several distinct personality traits, do the associations usually reported between religion and the five personality factors give a clear picture of the personality correlates of religion? Or could more detailed information be obtained by focusing on the facets level?

Second, given the theoretical and empirical links between personality and values (see below), questions arise as to whether religiousness is uniquely related to personality and values, and whether values are better predictors of religion than personality. In other words, is religion, in terms of individual differences, closer to strict personality traits or to values? Third, as spirituality emerges today as a distinct construct from religiousness (e.g., Zinnbauer and Pargament 2005), we investigated how spirituality, apart from or similarly to religion, is related to personality and values. Notice that, for each of these points, there is some evidence from previous studies (e.g., Piedmont 1999; Roccas et al. 2002; Saroglou and Fiasse 2003), but first we integrate here the three questions into one study and, second, we elaborate a theoretical framework because these questions were not the main objective in the previous studies.

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Religion and the Five Factors of Personality

Individual differences in religious attitudes, beliefs, and practices are supposed to reflect individual differences in personality. A religious person may think, feel, and behave—personality traits by definition imply some consistency between these three activities—in a somewhat different way than a nonreligious person when facing stress and emotions (“neuroticism”), novelty (“openness to experience”), challenges from the internal and external world that ask for self-control, orderliness, and responsibility (“conscientiousness”), when s/he is invested in interpersonal relationships (“agreeableness”), or is in contact and functions with others in general and in groups (“extraversion”).

This research question has been investigated in the past through various personality models (for reviews, see Francis 1992; Piedmont 2005). More recently, a number of studies have investigated this question within the five-factor model of personality. Two meta-analyses of two independent sets of studies (studies published up to 2004; total $k = 22$) totaling data from 8,282 participants (Saroglou 2002, in press) and the integration of results from previous studies (which used Eysenck’s taxonomy, Myers-Briggs Type Indicator, or Jackson Personality Form/Inventory), lead to the conclusion that, rather systematically across samples, cultures, religious denominations, and apparently cohorts, religious people tend to be high in agreeableness (A) and conscientiousness (C). The relation of religiousness to the other three factors is less clear, nonsystematic, and probably depends on the specific religious dimension in question. For instance, fundamentalism is related to low openness to experience (O); extrinsic religiousness to neuroticism (N); and charismatic religion to extraversion (E).

Although correlational, these studies provide substantial evidence that can be theoretically understood in two ways. Religious beliefs, practices, communities, and emotions may have an impact on the somewhat constant way religious people think, feel, and behave across a variety of contexts. Alternatively, according to McCrae and Costa’s (1999) model, people who are by “nature” (i.e., mainly genetically but also environmentally) agreeable and conscientious, and thus have these traits as *basic tendencies*, tend to be—remain or become—religious once they “meet” with religion as a cultural reality: religiousness then becomes one, among others, cultural *characteristic adaptation* of these basic tendencies (Saroglou, in press).

However, the associations between religion and the significant personality factors are rather weak (Saroglou 2002, in press). One possible reason is that the associations reported in previous studies most often remained at the broad five-factors level and did not delve more deeply into the many specific facets level. It seems very likely that, if we refer for instance to the NEO-PI-R, which integrates six specific by-factor facets, the five factors are too broad to sufficiently tap individual differences in external constructs such as religiousness in comparison with the 30 distinct personality traits. Each of the five factors includes many distinct personality traits that are not necessarily all expected to be related to religiousness, or in some cases may even be related to it in an opposite direction. Only two studies, to our knowledge, have published results detailing associations between religion and specific facets of the five factors, but this distinction between facets and factors as related to religion was not part of these studies’ objectives; in the first study, only three factors were included (Costa et al. 1986; Saroglou and Fiasse 2003). Thus, the first aim of this study was to investigate the associations between religion and personality not only in terms of the five broad factors but also in terms of the 30 specific facets using the NEO-PI-R comprehensive measure.

For instance, C includes both orderliness and competence. One can expect religious people to be rather systematically preoccupied by *order* in their internal and external world (Freud [1927] 1961; Lewis 1998) but not necessarily to be high in *competence* and *achievement striving*; interestingly, no clear or systematic evidence exists that religion is related to academic and professional performance. Similarly, with regard to E, there is no reason to hypothesize that religious people, at least today, are high or low in *gregariousness* or *activity*. We can also notice that it

is E rather than introversion that is socially valuable today (Watson and Clark 1997). There is, however, reason to hypothesize that religious people, as low in impulsiveness (Francis 1992), may be low in *excitement seeking*, an E facet in the NEO-PI-R that also constitutes one aspect of impulsiveness (e.g., Whiteside and Lynam 2001). Again, with regard to the O factor, if classic sociological theories on the role of religion in protecting against social anomie are true (Durkheim [1915] 1964), one can hypothesize religiousness in general to be negatively related to openness to novelty/open-mindedness facets such as *openness to values, actions, or ideas* (see also Costa et al. 1986; Saroglou and Fiasse 2003), but to be unrelated to facets more typical of openness to *experience* itself, such as openness to *fantasy, aesthetics, and feelings*. With regard to N, a factor that is overall rather unrelated to religiousness in general, it is not obvious what to expect on the facets level. In the NEO-PI-R, in addition to “purely” N facets (*positive emotions, depression, anxiety*), one also finds *impulsiveness* (negatively related to religion: Costa et al. 1986; Saroglou and Fiasse 2003), *angry hostility*, and *self-consciousness*. In a previous study using Eysenck’s taxonomy, different, sometimes opposite, associations were found between religious measures and specific components of N (Hills et al. 2004). Finally, it is only with regard to A that one can hypothesize positive associations of religiousness with most if not all facets, that is, *trust, straightforwardness, altruism, modesty, compliance, and tender-mindedness*.

Religion and Values

Individual differences in religiousness also reflect specific preferences in values (Feather 2005; Roccas 2005). If values are desirable goals that people use as guiding principles in their life, it appears obvious that a religious person may differ from a nonreligious person in the intensity and hierarchy with which s/he refers to universal values. Based on the 10 types of values included in the comprehensive and cross-culturally validated Schwartz (1992) model of values, empirical studies initiated by Schwartz and Huisman (1995) show rather consistent patterns of associations between religiousness and the 10 values. As found in a recent meta-analysis (Saroglou, Delpierre, and Dernelle 2004) of 21 studies from 15 countries (total $N = 8,551$), in a rather systematic way across countries, samples, and even across the three monotheistic religions, religious people tend to attribute high importance to values reflecting conservation (tradition, conformity) and limited self-transcendence (benevolence but not universalism), and low importance to values indicating openness to change and self-enhancement (self-direction, hedonism, stimulation, and in a less extended and systematic way, power and achievement). The association of religiousness with universalism may even be negative, for instance, in the case of monoreligious/cultural countries (Saroglou, Delpierre, and Dernelle 2004), and the association with security is often positive, except when religion and the church are treated negatively by the state, as in the previously communist countries (Roccas and Schwartz 1997).

Again, similarly to what is the case for studies on personality and religion, the correlational nature of the studies on values and religion does not allow for conclusions about the direction of causality. Both directions of causality are possible. Religious beliefs, practices, emotions, and communities may have an impact on values, that is, intensity and priority given to specific values. Alternatively, people who firmly hold certain values, that is, conservation of social order and prosocial values, and deemphasize opposite ones such as autonomy and hedonism, may turn to and find in religious systems, attitudes, and practices a way to express, live, and organize their hierarchy of values into a whole system.

Personality and Values

Interestingly, personality traits and values are very similar, though distinct constructs. As underlined by Dollinger, Leong, and Ulicni (1996:23–24), “both values and personality traits are broad categories of individual differences important to the study of persons that are, by

definition, assumed to be cross-situationally and cross-temporarily consistent.” The inherent links between them are underlined by Roccas et al. (2002:791): if traits are enduring *dispositions* and values enduring *goals*, then values may affect traits “because people try to behave in a way consistent with their values,” but traits may also affect values “because people who consistently exhibit a behavioral trait are likely to increase the degree to which they value the goals that trait serves.” Not surprisingly, several previous studies have documented numerous, complex but also, to some extent, systematic links between personality and values, especially in terms of associations between the five-factor model of personality and the Schwartz model of values (Luk and Bond 1993; Olver and Mooradian 2003; Roccas et al. 2002; Wolfradt and Dalbert 2003; Yik and Tang 1996).

However, personality-values associations are usually modest, which constitutes an empirical indicator of the distinctiveness of the two constructs. One reason for this discrepancy may be the fact that people do not always hold values that correspond to who they are. Sometimes, they may even hold values opposite to their personality traits, compensating for the latter (Adler’s idea cited by Herringer 1998). More importantly, the two constructs are by definition distinct. As summarized by several authors (Dollinger, Leong, and Ulicni 1996; Olver and Mooradian 2003; Yik and Tang 1996), personality traits, as transsituationally constant patterns of responses to the demands of the environment, are heavily genetic and inheritable, are little influenced by environment and environmental changes, and are highly stable throughout adulthood. They are also both logical and chronological antecedents to values. Values, on the other hand, though they may have been somewhat influenced by genetics, are rather theorized as learned guiding principles in the life of a person, are highly influenceable by education and environment in general, and are prototypically (see Dollinger et al. 1996) less stable and longer-lasting than traits. They thus constitute characteristic cultural adaptations of the personality traits or basic tendencies in terms of McCrae and Costa’s (1999) theory. In sum, whereas personality traits refer to *behavioral ways of responding* through cognitions, emotions, and actions, values are primarily, although not exclusively, *cognitive representations of desirable goals* and thus have a strong *motivational* dimension. In other words, if personality traits describe who I am (or who I think I am), values describe who I want to be.

Roccas et al. (2002) provide some interesting additional distinctions. Traits vary in the frequency and intensity of their occurrence, whereas values vary in their importance as guiding principles. People use both traits and values in order to explain behaviors, but values are used to justify choices or actions as legitimate or worthy. Finally, people judge themselves and others by referring to values and not to traits, probably, in our opinion, because we consider people responsible for their choices in values but not for their personality traits. As stated by Roccas et al. (2002:799), “traits have stronger influence on behavior over which individuals have little cognitive control, values on behavior under more voluntary control.”

Religion as Predicted by Personality or Values?

This similarity and distinctiveness between personality traits and values may have theoretical and empirical consequences regarding individual differences in religiousness. As the research tradition documents association of religiousness with both constructs, it is not to be excluded that the relation of religiousness with one construct is “contaminated” by its relation with the other construct, given the intercorrelations between personality and values. If this is the case, it is important for theory to examine which of the two, personality or values, better predict religiousness: Are people attached—or do they turn—to religion primarily because (a) they are agreeable and conscientious or (b) because they value social order, tradition, and benevolence, and they neglect as secondary the values of autonomy and hedonism?

Conversely, if we reverse the causal direction, does being or becoming religious have an impact (a) on personality itself or (b) on the hierarchy between and importance of specific values?

The question becomes even more important when one realizes that, up to this point in this article, we have treated religiousness as an external variable of individual differences with regard to personality and values. Although this is indeed our assumption, some scholars have theorized religiousness as a personality dimension itself, located beyond the five factors (e.g., Piedmont 1999), or as belonging to a set of values or social axioms and beliefs (Leung and Bond 2004; Saucier 2000; Schwartz 1992). Although such approaches may be problematic (religiousness is more than values; not everything that is located beyond the Big Five is necessarily a basic personality dimension), empirically studying whether religiousness is closer to personality or to values may help researchers to better conceptualize the specific status of religiousness as an individual differences variable.

Thus, the second objective of this study was to test the hypothesis that religiousness is associated with values rather than with personality traits, for the following reasons. First, religion provides us not so much with a description of immediate reality—a description of how the world or the human being works (this is rather the task of science)—as with a description of how the world or the human being should be. Interestingly, Christian (e.g., Patristic) anthropology qualifies the present status of humans as an alteration of an initial ideal status; similarly, the essence of human beings consists in their realization of an ideal, future status rather than the present one (e.g., Nellas 1989). Therefore, the motivational attractiveness of religion for people with specific values—or its impact on religious people's values—may be higher than its attractiveness or impact on people with specific personality profiles.

Second, although stability in individual trajectories with regard to pro-religious attitudes is an important reality (Spilka et al. 2003), people often abandon religion, change religious affiliation or religious orientation, or discover faith in the absence of previous religious socialization (Francis and Katz 2000). Given the high lifespan stability of personality traits, values are better candidates than traits for understanding these trajectories. Indeed, previous research in psychology of conversion demonstrates that changes on the first level of personality—which corresponds to McCrae and Costa's personality traits defined as basic tendencies—are nonexistent following a religious conversion, whereas changes exist on the second and third levels of personality in terms of McAdams's (1996) model, which include goals, purposes, values, identity, and self-definition (Paloutzian, Richardson, and Rambo 1999). Additionally, a core element of religious conversion seems to be the creation of a new meaning system (Paloutzian 2005), a reality that can be suspected to be primarily cognitive and motivational, and thus closer to values than to personality traits.

Third, if values are more than "innate" traits subject to environmental and family influences, then they may predict religiousness better than traits do. This is because familial religious education and religious socialization in general are the strongest predictors of adult religiousness (Spilka et al. 2003) and because twin studies suggest a stronger influence of environment over genetics in religiousness (D'Onofrio et al. 1999). Fourth, as suggested by Roccas et al. (2002: 793–94), "religion, similar to values, is concerned with the evaluation and justification of choices and actions" more than with the explanation of human behavior. Finally, individual differences in four out of the five personality traits (excluding C) are also found among animals (Gosling 2001); individual differences in values can hardly be imagined in animals. Therefore, from an evolutionary perspective, we may assume religion to be closer to more culturally evolved and complex psychological constructs such as values than psychological realities of primary and direct adaptive relevance (see Buss 1996, for an evolutionary perspective on personality traits), although values also have adaptive functions (Roccas et al. 2002; Schwartz 1992).

In a previous study with 246 students at an Israeli university, Roccas et al. (2002) found that when personality traits are introduced as predictors in addition to values they do not increase the explained variance of religiosity; but when values are added to personality they strongly increase this variance. On this issue, our study constitutes a replication and extension of Roccas et al.'s (2002) study, by testing a culturally and religiously different sample, Spanish students from a

Catholic tradition, and by extending the study to spirituality as well (see below). In line with this previous study and our theorization, we expected religiousness to be predicted by values rather than personality traits, once the overlap between the two constructs was controlled for.

Spirituality Versus Religiousness

Spirituality is emerging today as a new psychological reality, concept, and research subject, partially distinct from religiousness (e.g., Hill and Pargament 2003). Although there is no clear consensus about its definition—notice that the case has been similar for religion for centuries—recent conceptualizations agree that modern spirituality (a) includes a reference to transcendence or the sacred but not necessarily God or gods as defined within religious traditions and (b) emphasizes an individual reality of connection with transcendence, others, and the world in general, without necessarily belonging or referring to a particular religious institution or group (e.g., Hill et al. 2000; Miller and Thoresen 2003; Piedmont 1999). There is also evidence that people today value spirituality more than religiousness, and there is an increasing number of people declaring they are spiritual but not religious, whereas very few people report the opposite, that is, being religious but not spiritual (Zinnbauer, Pargament, and Scott 1999). There is less consensus, however, on other issues, for instance, whether spirituality is a concept broader than religiousness and whether it reflects a dynamic rather than static, and an emotion-based rather than beliefs-based reality (Zinnbauer and Pargament 2005).

One way to advance in theory is to investigate differences and similarities between the two constructs in the way they relate to other psychological realities. Importance of spirituality in life may be a reality distinct from, but still related to, importance of religion or religiousness. Personality and values may be particularly interesting for this purpose, as individual differences in spirituality can be suspected, similarly to religiousness, to reflect—to be influenced by, or have an impact on—variations in the frequency and intensity of some personality traits and on the importance attributed to specific values.

The third objective of this study was thus to investigate how spirituality relates to personality and values. As religion and spirituality are both similar and distinct constructs, one can suspect some associations of spirituality with personality and values similar to and others different from religion. More precisely, prosocial ideals are very present in spirituality, so prosocial values and traits may correspond to high scores in spirituality, just as they do in religiousness. Hence, we expected positive associations of spirituality with agreeableness and benevolence, and negative associations with power and achievement. In addition, as modern spirituality, similarly to religion, seems to imply a discomfort with materialistic values and (egotistic) self-gratification, the associations with hedonism and stimulation could be negative, although some modern spiritual valorizations of the body and the senses may lead to the absence of such negative associations typical of traditional religiousness. Moreover, it is intriguing to see what may be the case with regard to traits and values relative to the need for order and conservation. As spirituality is a rather autonomous expression of the individual's relation with transcendence, independently of religious institutions and traditions, one may expect that spirituality will not show the typical pattern of religion, which is positively associated with conscientiousness and the values of tradition, conformity, and sometimes security, and negatively associated with self-direction. In addition, as spirituality is a personal expression independent from affiliation and faithfulness to a specific religious tradition and so independent from borders between religious traditions, one may expect it not to follow the religious association with low universalism.

Finally, our expectation about the preponderance of values over personality in predicting religiousness should also apply to spirituality. Spiritual transformations parallel the psychological dynamics of traditional religious conversions (Paloutzian 2005). Spiritual changes may thus correspond to changes in values, whereas personality traits are more immune to these changes. In addition, a variety of spiritual ideas and systems parallel religion in that they also put an emphasis

on what is desirable and valuable for humans and the world rather than on a mere explanation of human behavior.

METHOD

Participants and Procedure

The sample included 256 Spanish students in education (167 women and 89 men), studying at a state (nonprivate, non-Catholic) university in the south of Spain. Mean age was 22.2 years ($SD = 6.26$), and the range of age was 17–53 years. The sample was homogenous with regard to ethnicity (native Spaniards) and religion: all students had received a Catholic education and 55 percent of them currently defined themselves as Catholics. The participants received and filled in the questionnaire in groups of medium size (40–50 people) at two different times (see the length of the NEO-PI-R). The first time, participants filled in the values and religious measures (the order between these measures was randomized), and the second time, they answered the personality questionnaire. The students received credits for their participation in the study. Their responses were anonymous but the two parts of the protocol were identified thanks to a code system.

Materials

Values

In order to measure the importance of each value as a guiding principle in the participant's life, we used the Spanish version (Ros and Grad 1991) of the Schwartz (1992) Value Survey. The Schwartz Value Survey (1992) includes 56 single-value items representing a group of 10 (types of) values that can be summarized as reflecting a first axis of conservation (tradition, conformity, security) versus openness to change (self-direction, stimulation) crossed with a second axis of self-enhancement (power, achievement, hedonism) versus self-transcendence (benevolence, universalism). Definitions of the values, corresponding single-value items, as well as the way structural relations between the 10 values may be spatially represented, can be found in Schwartz (1992). The structure of the 10 values has shown cross-cultural stability across dozens of countries and has been found to relate meaningfully to a whole series of behaviors. Respondents rate the importance of each value item as "a guiding principle in my life" on a nine-point scale ranging from 7 (*of supreme importance*) to -1 (*opposed to my values*). In the analyses carried out on our data, we used all items and not only the restricted pool of 44 items (as in several studies; see Schwartz and Sagiv 1995) because reliability of the 10 types of values decreased in the latter case.

Personality

The Spanish version (Costa and McCrae 1999) of the NEO Personality Inventory-Revised (NEO-PI-R; Costa and McCrae 1992) was used in order to measure the Big Five personality factors as well as the 30 personality facets (six for each factor). This Spanish version has shown structural equivalence with American, Italian, and German versions of the NEO-PI-R (Caprara et al. 2000).

Religiousness

An eight-item, seven-point scale of religiousness was used (Saroglou and Galand 2004). This scale distinguishes among: (a) *personal, classic religiosity* (three items: importance of God in life, importance of religion in life, and frequency of prayer); (b) *emotional religion* (four items: interest in emotional-relational aspect, community aspect, meaning-values, and personal

experience in religion); and (c) *spirituality* (one item on importance of spirituality in life). The first two subscales correlate strongly with intrinsic religious orientation (Saroglou and Mathijssen 2007). The importance of spirituality index measures a distinct phenomenon from, but still related to, religiousness reality. It further has the advantage of not applying researchers' preconceptions about spirituality to participants, while still allowing us to find distinct external correlates for religion and spirituality in line with recent theorization on these two constructs (e.g., Saroglou and Fiasse 2003; Saroglou and Galand 2004; Saroglou and Mathijssen 2007; Saroglou et al. 2005).

The three-factor structure was found in a total of 2,000 people in previous studies with Belgian participants, and was also replicated in three culturally different samples of young adults living in Belgium, that is, native (Catholic tradition), Muslim (ex)immigrants from Mediterranean countries, and other immigrants (Saroglou and Galand 2004). Interestingly, the three-factor structure was also replicated in this sample of Spanish students. When asked for extraction of three factors (principal component analysis with varimax rotation), a total correspondence was found between the items and the corresponding factors. With the exception of two out of 16 cases, no second loading was higher than 0.35, and the total variance explained was 82.94 percent. The reliabilities were satisfactory: $\alpha_s = 0.88$, for classic, and 0.90, for emotional religiousness. Finally, the three factors were only moderately intercorrelated (r_s varied from 0.55 to 0.67). For the sake of convenience, in the presentation of results, we will refer to them as the three "religious measures," maintaining the term "religiosity" or "religion" when we contrast the two first measures to the importance of spirituality index.

RESULTS AND DISCUSSION

Religion and Personality

Means, standard deviations, and reliabilities of all measures are presented in Table 1. As detailed in Table 2, all three religious measures were positively correlated with conscientiousness (C), and more particularly with the competence, the achievement striving, and the self-discipline facets. Emotional religion was also significantly related to order. Apparently, both proactive (such as competence and achievement striving) and inhibitive (order and self-discipline) dimensions of C were positively related to religion (see also Saroglou and Fiasse 2003, for a study in Belgium). Also, all three religious measures were positively correlated with agreeableness (A) and, with some sporadic exceptions, all of them were related to all A facets. These two patterns of results are in line with previous literature showing that A and C are the most important personality factors of religiousness, and this probably holds across different cultures, religions, and cohorts (Saroglou 2002, in press).

Interestingly, all three religious measures were also related to high anxiety and vulnerability, a result that was responsible for the significant positive correlation between the two religiousness measures and the neuroticism (N) factor. This is not really in line with previous literature on the Big Five and religion suggesting lack of global associations with N, except if we speculate that the religiosity of Spanish students is somewhat extrinsic: previous studies indicate that high N scores characterize extrinsically religious people (see Saroglou 2002, for review). An alternative interpretation could be that Spanish Catholicism is still concerned with guilt and fear of divine judgment, aspects of faith that can be related to anxiety. Notice, however, that high N also seems to characterize religious people in the United Kingdom (Hills et al. 2004) and Canada (Paunonen 1998), and the religious values of Austrians (Renner 2003).

In line with previous research suggesting few or no association between religion and extraversion (E), religious measures in this study were unrelated to the factor of E. However, in line with the results relative to A, all religious measures were positively related to the E facet of warmth. In addition, students who scored high on emotional religion and importance of spirituality tended to also be low in assertiveness. If we consider that insecurity in attachment seems to

TABLE 1
DESCRIPTIVE STATISTICS FOR VALUES, PERSONALITY, AND RELIGIOUSNESS

	<i>M</i>	<i>SD</i>	α
Values			
Benevolence	5.14	0.91	0.68
Power	3.21	1.16	0.70
Achievement	4.53	0.94	0.58
Hedonism	4.78	1.22	0.52
Self-direction	5.23	0.80	0.61
Universalism	5.14	0.87	0.59
Tradition	4.00	1.07	0.61
Conformity	4.71	1.03	0.65
Security	4.82	0.84	0.64
Stimulation	3.42	1.30	0.60
Personality			
Extraversion	106.92	15.16	0.65
Openness	102.77	18.65	0.76
Agreeableness	118.84	18.38	0.77
Conscientiousness	109.96	19.22	0.83
Neuroticism	97.42	15.93	0.72
Religiousness			
Religiosity	3.83	1.77	0.88
Emotional religion	4.21	1.79	0.90
Spirituality	4.27	1.62	

Note: $N = 256$.

correspond to emotion-based religion whereas security in attachment characterizes religiousness by socialization (Granqvist and Hagekull 1999), it may be that people who are attached or turn to religion or some forms of modern spirituality for emotional reasons have a particularly low self-esteem (E3) and look to improve their self-image through religious beliefs and activities.

In line with previous literature (Saroglou 2002; see also Piedmont 2005; Saucier 2000), openness (O) was the personality dimension that distinguished modern spirituality from classic religiosity in an interesting way. Whereas religious measures in general were negatively correlated with O to actions (all three measures), it was only importance of spirituality that correlated positively with O as a global factor and with the facets of O to values, fantasy, aesthetics, and feelings. Religiosity was unrelated to the openness to experience facets and was negatively related to openness to values. Emotional religion shared with spirituality some openness to experience. Apparently, spirituality, contrary to religion, implies—or is predicted by—openness to both novelty and fantasy. However, it shares with religion the low propensity to openness to actions, probably because, at least as far as Spanish students are concerned, spirituality may reflect some dispositional, motivational openness, but not necessarily an openness translated into behavior. Emotional religion is located in a space between classic religion and spirituality: it shares with the former some close-mindedness (actions and ideas) and with the latter some emotional and artistic openness, but does not broaden this openness to a free imagination or to novelty of values.

A final issue is the very low variance of religiousness explained by personality factors. Paunonen (1998; Paunonen and Ashton 2001) argued and found that the specific variance accounted for narrower facets increases the prediction of series of behavioral criteria including religiousness in comparison to the broad five factors. Therefore, we carried out two sets of three multiple regression analyses with each of the three religious measures as the outcome variable

TABLE 2
COEFFICIENTS OF CORRELATIONS BETWEEN RELIGIOUS MEASURES AND
PERSONALITY FACTORS AND FACETS

Personality	Religiosity		
	Religiosity	Emotional Religion	Spirituality
Extraversion	0.02	0.02	-0.02
E1. Warmth	0.13*	0.21**	0.13*
E2. Gregariousness	0.07	0.08	-0.01
E3. Assertiveness	-0.11	-0.13*	-0.18**
E4. Activity	0.09	0.09	0.03
E5. Excitement seeking	-0.08	-0.07	-0.05
E6. Positive emotions	0.01	0.00	0.02
Openness	-0.06	0.09	0.13*
O1. Fantasy	-0.01	0.11	0.17**
O2. Aesthetics	0.04	0.18**	0.17**
O3. Feelings	0.10	0.24**	0.19**
O4. Actions	-0.22**	-0.20**	-0.22**
O5. Ideas	-0.18**	-0.12	0.03
O6. Values	-0.04	0.06	0.14*
Agreeableness	0.19**	0.30*	0.24**
A1. Trust	0.06	0.17**	0.10
A2. Straightforwardness	0.17**	0.22**	0.24**
A3. Altruism	0.18**	0.26**	0.22**
A4. Compliance	0.12*	0.21**	0.16**
A5. Modesty	0.15*	0.20**	0.11
A6. Tender-mindedness	0.10	0.15*	0.15*
Conscientiousness	0.19**	0.21**	0.21**
C1. Competence	0.14*	0.23**	0.19**
C2. Order	0.12	0.13*	0.10
C3. Dutifulness	0.11	0.12	0.11
C4. Achievement striving	0.21**	0.19**	0.27**
C5. Self-discipline	0.17**	0.18**	0.20**
C6. Deliberation	0.08	0.08	0.09
Neuroticism	0.15*	0.15*	0.12
N1. Anxiety	0.26**	0.29**	0.24**
N2. Hostility	-0.00	-0.05	0.00
N3. Depression	0.08	0.07	0.04
N4. Self-consciousness	0.07	0.07	0.07
N5. Impulsiveness	0.01	-0.07	-0.05
N6. Vulnerability	0.14*	0.22**	0.15*

* $p < 0.05$; ** $p < 0.01$, two-tailed.

each time. In the first set, all five factors were introduced as predictors. In the second set, we introduced as predictors the personality facets that were significantly correlated with each religious measure (as was detailed in Table 2). The increase of explained variance was not as spectacular as in Paunonen's studies, but still the specific facets together seemed to explain much more of variance of religion in comparison with the five factors. The adjusted R^2 did not increase for classic religiosity (0.11), but increased from 0.12 to 0.17 for emotional religion, and from 0.07 to 0.14 for importance of spirituality.

Religion and Values

Table 3 details the partial correlations between religious measures and the 10 values. As is usual in studies using the Schwartz Values Survey, we controlled for the mean importance of all values in order to guarantee discrimination between values. In line with previous literature (Feather 2005; Roccas 2005; Saroglou, Delpierre, and Dernelle 2004), the religiosity measures were associated with high importance attributed to conformity, tradition (only classic religiosity), and benevolence, but also with low importance attributed to self-enhancement values (power, for both religiosity measures, and achievement, for emotional religion), hedonism, and self-direction. Also, in conformity with what happens in Mediterranean countries of Christian, Jewish, or Muslim tradition, that is, countries with a strong monoreligious culture, as opposed to Western European countries marked by secularization and co-dominance of different religious-philosophical traditions (see Saroglou, Delpierre, and Dernelle 2004, for the comparison), the religiousness of our Spanish participants was negatively related with universalism. The only values missing here, if we refer to the previous literature on religion and values, were (high) security and (low) stimulation.

Spirituality showed a specific pattern of associations with values. On the one hand, it shared with religion the prosocial tendency in interpersonal relationships (benevolence), as well as some restriction of a self-enhancement that may not be respectful of others: power and achievement have some antisocial components in Schwartz's model, such as dominance of people and resources, being ambitious and influential, whereas the NEO-PI-R C4, that is, achievement striving, purely refers to competence and pursuing excellence. On the other hand, spirituality does not share the mistrust religion shows with regard to universalistic values, self-direction, hedonism, nor the proximity of religion with conservation values. These results are in line with previous studies distinguishing between "immanent religion" and intrinsic religion (Burris and Tarpley 1998) or showing some influence of the socioeconomic development on the religion-values associations (Saroglou et al. 2004): new religious expressions seem to share prosocial values with classic religion but not the emphasis on conservation and survival values (see also Inglehart and Baker 2000).

Personality and Values

The partial correlations between values and the five personality factors (controlling for the mean importance attributed to all values) are detailed in Table 4. We organize here the presentation

TABLE 3
COEFFICIENTS OF CORRELATIONS BETWEEN RELIGIOUS MEASURES
AND VALUES^a

	Values									
	BE	PO	AC	HE	SD	UN	TR	CO	SE	ST
Religiosity	0.24**	-0.13*	-0.04	-0.23**	-0.20**	-0.18**	0.19**	0.20**	0.10	-0.06
Emotional religion	0.35**	-0.17**	-0.13*	-0.15**	-0.12*	-0.12*	0.02	0.21**	0.05	0.03
Spirituality	0.30**	-0.22**	-0.20**	-0.10	-0.03	0.07	0.03	0.08	-0.05	0.06

^aPartial correlations controlling for mean importance of values.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed.

Note: BE = Benevolence; PO = Power; AC = Achievement; HE = Hedonism; SD = Self-direction; UN = Universalism; TR = Tradition; CO = Conformity; SE = Security; and ST = Stimulation.

TABLE 4
COEFFICIENTS OF CORRELATIONS BETWEEN VALUES AND PERSONALITY FACTORS AND FACETS ^a

Personality	Values									
	BE	PO	AC	HE	SD	UN	TR	CO	SE	ST
Extraversion	-0.00	0.02	0.07	0.14*	0.05	-0.11	-0.08	-0.09	-0.07	0.27**
E1. Warmth	0.23**	-0.18*	-0.12*	0.08	0.14*	-0.09	-0.10	0.05	0.07	0.13*
E2. Gregariousness	0.04	0.10	0.04	0.00	-0.07	-0.15*	0.02	0.03	0.03	0.07
E3. Assertiveness	-0.22**	0.13*	0.17**	0.02	0.06	0.03	0.02	-0.17**	-0.12	0.00
E4. Activity	0.02	-0.07	0.04	0.16*	0.02	-0.01	-0.17*	-0.05	-0.10	0.30**
E5. Excitement seeking	-0.14*	0.12	0.17**	0.20**	-0.04	-0.13*	-0.15*	-0.16*	-0.04	0.31*
E6. Positive emotions	0.07	-0.05	-0.06	0.05	0.07	-0.04	0.07	0.00	-0.08	0.15*
Openness	0.35**	-0.36**	-0.24**	0.24**	0.23**	0.16*	-0.43**	0.01	-0.05	0.40**
O1. Fantasy	0.29**	-0.19*	-0.20**	0.12	0.17**	0.05	-0.31**	0.01	0.06	0.26**
O2. Aesthetics	0.32**	-0.38**	-0.23**	0.21**	0.17**	0.20**	-0.32**	-0.06	-0.10	0.32**
O3. Feelings	0.37**	-0.30**	-0.26**	0.20**	0.13*	-0.00	-0.29**	0.21**	-0.03	0.36**
O4. Actions	-0.02	-0.14*	0.08	0.15*	0.19**	0.10	-0.18**	-0.16*	-0.06	0.12
O5. Ideas	0.06	-0.19**	-0.08	0.16*	0.10	0.21**	-0.24**	-0.10	-0.13*	0.25**
O6. Values	0.33**	-0.25**	-0.25**	0.11	0.21**	0.11	-0.39**	0.11	0.04	0.28**
Agreeableness	0.49**	-0.35**	-0.35**	0.00	0.08	0.02	-0.17**	0.33**	0.08	0.14**
A1. Trust	0.27**	-0.16*	-0.20**	0.09	-0.06	-0.03	-0.04	0.19**	-0.01	0.14*
A2. Straightforwardness	0.42**	-0.30**	-0.27**	-0.12	0.07	0.07	-0.10	0.29**	0.07	-0.01
A3. Altruism	0.43**	-0.25**	-0.34**	-0.02	0.05	-0.06	-0.09	0.34**	-0.01	0.24**
A4. Compliance	0.16*	-0.11	-0.10	-0.04	-0.03	0.00	-0.05	0.16*	0.13*	-0.02
A5. Modesty	0.34**	-0.32**	-0.19**	0.04	0.13*	0.07	-0.25**	0.14*	0.15*	0.07
A6. Tender-mindedness	0.37**	-0.30**	-0.33**	-0.06	0.15*	0.04	-0.18*	0.21**	0.04	0.15*
Conscientiousness	0.29**	-0.25**	-0.22**	0.03	0.11	-0.01	-0.08	0.25**	0.05	0.02
C1. Competence	0.29**	-0.22**	-0.20**	0.10	0.08	-0.03	-0.13*	0.18**	0.00	0.16*
C2. Order	0.17**	-0.16*	-0.12	0.00	0.01	-0.01	-0.03	0.14*	0.08	-0.02
C3. Dutifulness	0.25**	-0.18**	-0.23**	-0.06	0.05	0.01	-0.01	0.24**	0.07	-0.06
C4. Achievement striving	0.23*	-0.21**	-0.11	0.05	0.09	-0.01	-0.10	0.21**	-0.02	0.08
C5. Self-discipline	0.24**	-0.23**	-0.19*	0.08	0.10	-0.05	-0.08	0.23**	0.06	0.07
C6. Deliberation	0.13*	-0.10	-0.13*	-0.04	0.05	0.04	-0.00	0.14*	0.01	-0.12
Neuroticism	0.10	-0.04	-0.00	-0.03	-0.11	-0.00	-0.06	0.05	0.07	0.05
N1. Anxiety	0.31**	-0.18**	-0.19**	0.03	-0.08	0.01	-0.10	0.23**	0.05	0.14*
N2. Hostility	-0.11	0.08	0.09	-0.04	-0.01	0.09	-0.02	-0.15*	-0.10	0.03
N3. Depression	-0.02	0.02	0.07	-0.06	-0.05	-0.07	0.01	0.01	0.13*	-0.03
N4. Self-consciousness	0.04	0.05	0.03	-0.12	-0.15*	-0.03	0.03	0.09	-0.00	-0.02
N5. Impulsiveness	-0.02	-0.06	0.14*	0.09	-0.06	0.04	-0.06	-0.07	0.00	0.01
N6. Vulnerability	0.18**	-0.06	-0.13	-0.02	-0.09	-0.04	-0.07	0.05	0.15*	0.03

^aPartial correlations controlling for mean importance of values.

* $p < 0.05$; ** $p < 0.01$, two-tailed.

Note: BE = Benevolence; PO = Power; AC = Achievement; HE = Hedonism; SD = Self-direction; UN = Universalism; TR = Tradition; CO = Conformity; SE = Security; and ST = Stimulation.

of results by each personality factor and we compare results with previous studies that have examined the relation between personality and values in terms of the five-factor model and Schwartz's model, respectively, that is (1) Luk and Bond (1993), (2) Olver and Mooradian (2003), (3) Roccas et al. (2002), (4) Wolfradt and Dalbert (2003; only for conformity, security, and self-direction), and (5) Yik and Tang (1996).

Extraversion

Overall, E was positively associated with hedonism and stimulation. This is in line with previous studies (3 for hedonism; 1, 2, 3, 5 for stimulation). At the facets level, activity and excitement seeking were responsible for these results. Previous studies also found E to be related positively to power and achievement (2, 3, 5) and negatively to conformity (2, 3), which in this study was found at the facets level of assertiveness and/or excitement seeking. This tendency for self-expansion and satisfaction by possibly disregarding others may explain the following additional associations: assertiveness and excitement seeking—contrary to warmth—were negatively related to benevolence, and excitement seeking was also inversely related to universalism. Similarly, activity and excitement seeking were negatively related to tradition. Finally, an intriguing result (but see also previous Study 2) was that gregariousness was negatively related to universalism.

Openness to Experience

O was related to self-transcendence (positively with benevolence and universalism) versus self-enhancement (negatively with power and achievement) values, as well as to openness to change and sensuous gratification values (positively with self-direction, stimulation, and hedonism) versus (negatively with) tradition. This was the case every time (except for universalism) with most if not all O facets. This overall profile of O values associations is in line with previous studies (1, 2, 3, 4, or 5). What was specific in this study was the associations of O with benevolence (positive) and achievement (negative), but these results can be understood as reflecting a dimension of openness to others. Finally, the negative link of O with conformity found in all previous studies (1, 2, 3, 4, and 5) was limited here to only openness to actions, a facet that is “the opposite of rigidity” (McCrae and Costa 2003:49). Interestingly, openness to feelings was, on the contrary, positively related to conformity, but notice that conformity includes items referring to the quality of relationships, such as politeness and honoring parents and elders.

Agreeableness

Agreeableness as a total factor and/or many if not most of its facets were positively related to benevolence and conformity (similarly to previous Studies 1, 2, 3, 5), and negatively related to the two “ego-dominance” values of power and achievement (similarly to 1, 2, 3). Contrary, however, to previous studies (1, 2, 3, 5), this prosocial tendency was not “extended” from benevolence to universalism and A was negatively related to tradition; this was the case because of modesty and tender-mindedness. We do not have an explanation for this finding. Finally, agreeableness and the trust, altruism, and tender-mindedness facets were positively related to stimulation, in contrast with two previous studies (2, 3), where stimulation was negatively associated with A and A facets. It is not to be excluded that, within a Mediterranean character, daring and having an exciting and varied life (stimulation items) are not incompatible with being prosocial.

Conscientiousness

C and many of its facets were positively related to benevolence and conformity. A sense of responsibility (for others) may explain the negative association of C (factor and facets) with power and achievement. The high conformity of conscientious people seems stable across studies (1, 2, 3, 4, 5), and this is also the case, to a lesser extent, with benevolence (see 2, 5). However, the association of C with achievement, especially of its proactive components (see 3), is usually positive in the other studies, and the association with power is inexistent (2, 3, 5). An antisocial aspect of achievement may be responsible for this negative association. Indeed, the negative

correlation disappeared and became close to zero when the item “ambitious” was dropped out of the achievement scores.

Neuroticism

Values were fairly unrelated to N as a factor, and this in line with previous research suggesting no such relations, or sporadic and inconsistent ones. At the facets level, depression and vulnerability were positively related to security (an indication of compensation between traits and values?). Similarly, anxiety was positively related to conformity but the opposite was the case for hostility. Vulnerability and anxiety were related to benevolence, a finding that reminds us of the classic link between personal distress and empathy. Anxiety—contrary to assertiveness? see above—was also negatively related to power and achievement. Impulsiveness was positively related to achievement—again, a Mediterranean characteristic? Finally, two last results are less easy to interpret: a positive association between anxiety and stimulation, and a negative association between self-consciousness and self-direction.

Religion as Predicted by Both Personality and Values

Following Roccas et al. (2002), we carried out two series of three hierarchical regression analyses. In each series, one of the three religious measures (religiosity, emotional religion, and importance of spirituality) was entered each time as the predicted variable. The first series entered the 10 values first as predictors of the religious variable and then the five personality factors. The second series entered the personality factors first and then the values. Table 5 details the variance in every religious measure accounted for (adjusted R^2) in each step of each analysis. When entered in the first step, values accounted for 22 percent of the variance for religiosity and emotional religion, and 12 percent for spirituality. The addition of personality factors did not increase the variance explained (respectively, 25 percent, 23 percent, and 13 percent). When entered in the first step, the personality factors accounted for 11 percent, 12 percent, and 7 percent for religiosity, emotional religion, and spirituality. The addition of values considerably increased the amount of variance explained, that is, 25 percent, 23 percent, and 13 percent, respectively, for the three religious measures. (By considering together the two series of regression analyses, it turned out that the common overlap between personality and values in explaining religious measures was 8, 11, and 6 percent of the total variance, respectively, for religiosity, emotional religion, and importance of spirituality.)

These results replicate Roccas et al.’s (2002) study of Israeli students with a different sample, that is Spanish students of Catholic tradition; extend them to spirituality and emotional religion;

TABLE 5
PERCENTAGE OF VARIANCE¹ IN RELIGIOUS MEASURES ACCOUNTED FOR IN HIERARCHICAL REGRESSION ANALYSES

Predictors	Religiosity	Emotional Religion	Spirituality
Values first			
Step 1: Values	0.22***	0.22***	0.12***
Step 2: Personality factors	0.25*	0.23	0.13
Personality first			
Step 1: Personality factors	0.11***	0.12***	0.07***
Step 2: Values	0.25***	0.23***	0.13*

¹Adjusted R^2 .

* $p < 0.05$; *** $p < 0.001$.

and confirm our expectations based on the theoretical considerations developed in the introduction. Values seem to predict religiousness and specific religious dimensions better than personality factors do and to account for unique variance that does not overlap with personality.

CONCLUSION

Individual differences in religion and spirituality reflect differences in both basic personality traits (first level of personality) and values (a key aspect of the second level of personality; McAdams 1996), the later being considered as cultural adaptations of the strict personality traits (McCrae and Costa 1999, 2003). This study provided interesting and compelling evidence that deepens our understanding of the above-mentioned individual differences of religiousness in three ways.

First, more detailed information is obtained when one focuses on how religious measures relate to many specific personality facets (30 for the NEO-PI-R) than to the five broad personality factors. Of course, with regard to A and C, which are the “typically” religious personality factors (Saroglou 2002, in press), this is less the case, as most of their facets contributed to the association of religion with A and C, and the present results suggest that both proactive and inhibitive aspects of C reflect high religiousness. It is more the case with N, E, and O facets: openness to experience versus openness to novelty/open-mindedness facets (O), assertiveness versus warmth (E), vulnerability versus anxiety (N; but see also Costa et al. 1986, and Saroglou and Fiasse 2003, for impulsiveness) seem to have specific, divergent, if not conflicting, associations with religion. Not surprisingly, then, in accordance with Paunonen (1998; Paunonen and Ashton 2001), more variance of religiousness was explained when analyses focused on the facets rather than the broad factors level.

Second, values seem to predict religiousness better than personality traits do; indeed, they do it in a unique way. On the contrary, the predictiveness of personality on religion overlaps with the one of values. These results replicate Roccas et al. (2002) and are in line with previous research indicating that conversion is followed by changes only on a surface level and not on basic, deep traits of personality (Paloutzian, Richardson, and Rambo 1999). They confirm the idea that religion is concerned more with evaluation and justification than with the explanation of human action, and they suggest that religiousness as an individual differences reality is closer to values, social beliefs, and axioms than to basic personality traits (see our “Introduction”).

However, these results do not allow us to conclude that personality is irrelevant for understanding individual differences in religiousness. Take for instance McCrae and Costa’s (1999) model of personality. In the causal direction where religiousness is the outcome, values mediate the link between basic personality tendencies and religion, the latter being one among other characteristic, cultural adaptations of these tendencies. Thus, people who are (also genetically) agreeable and conscientious and not necessarily high in openness may consequently tend to manage their lives through values that reinforce conservation of social order (tradition, conformity) and benevolence, and may not privilege autonomy and universalism (values often reflecting O), and values that define the expansion of the individual somewhat to the detriment of others (hedonism, power, and achievement, all of them reflecting low A and C). If, in addition, these people meet with religion in their family or social environment, they will likely be—remain or become—religious because religion provides an integrated set of worldviews and practices that solidify the above-mentioned value priorities. Finally, one could argue that it is theoretically more intriguing and stimulating to examine how distant (i.e., personality) rather than proximal (i.e., values) constructs may have an impact on a third specific psychological variable (here, religiousness).

Another conclusion that can be drawn from the current and previous studies is that the most temperamental personality dimensions (E, N) seem less relevant for understanding individual differences in religion in general. This is probably because they can less easily be translated into values. In fact, it is the character- and virtues-related (see Cawley, Martin, and Johnson

2000) personality factors of A and C that have clear and systematic links with religiousness and it is O that distinguishes between open- versus closed-minded religious dimensions such as spirituality versus religious fundamentalism. Interestingly, it is these same three, primarily intellectual rather than affective (Yik and Russell 2001) factors, and not E and N, that also show clear and substantial links with values (see also Olver and Mooradian 2003). It is also these factors that show developmental changes in adolescence (decrease of C and A, increase of O) and adulthood (decrease of O, increase of A and C; Helson et al. 2002) that parallel in a surprising way the developmental changes in religiousness during these age periods.

On the basis of our results, spirituality (importance of spirituality in personal life) appears as both similar and distinct from classic religiosity. First, it shares with religion a prosocial tendency, both in terms of personality (A) and values (benevolence). This tendency is intensified because our spiritual participants also deemphasized values related to dominance and success over resources and people (power, achievement). It is also extended because, contrary to religion, it is not necessarily limited within in-group borders: the low emphasis of religion on universalism disappears. These findings add to previous evidence on the ongoing debate and recent research on whether modern spirituality reflects individualism (Bellah et al. 1985) or prosocial tendencies (Dillon, Wink, and Fay 2003; Saroglou et al. 2005).

Second, spiritual people seem to be similar with religious people in that they are conscientious. However, this orderliness, methodicalness, and competence does not translate—as in religion—into a high importance attributed to conservation values, nor into low importance attributed to self-direction and hedonism. Spiritual people even appear to be high in O—although more clearly in openness to experience *per se* than in openness to novelty/open-mindedness. These results are in line with a previous meta-analysis showing that open, mature religion and spirituality are positively correlated both with conscientiousness and openness (Saroglou 2002). It is possible that spiritual people find in spirituality some elements that allow them to maintain a sense of self-control—notice that self-control is an important element in many spiritual traditions—especially given the presence of some neurotic tendencies (similarly to religion) in the present sample. However, they seem able to use new and autonomous ways to deal with experience and spiritual meaning. In other words, spiritual people are half way between religious and liberal people: they do not show the authoritarian-like pattern of values that characterizes the former (see Feather 2005, for the parallelism), but neither are they as progressive as the latter, who highly value self-direction and universalism (Barnea and Schwartz 1998; Caprara et al. 2006) and who are high in openness to novelty (McCrae 1996). The world of spiritual people seems to be one of peace, love, and fantasy, but of some order, too.

The limitations of our study are important but not handicapping. First, paper-and-pencil measures may be responsible for some overlap between personality and values because of shared method variance: endogenous traits can only be inferred indirectly from patterns of characteristic adaptations (Olver and Mooradian 2003). Religious people tend to be high in social desirability (Trimble 1997), more precisely, in impression management rather than self-deception (Saroglou and Galand 2004), and religion may imply a strong need for correspondence between self-perceptions and pattern of preferred values. However, there is increasing evidence that social desirability should be seen as a substantial part of personality rather than a self-perception bias (e.g., Graziano and Tobin 2002; Ones, Viswesvaran, and Reiss 1996). Second, the sample comes from a particular culture, religion, and age (Spanish students of Catholic tradition). However, the fact that our results replicate previous research in many points suggests the plausibility of some generalizability of the conclusions concerning the interplay between religion-spirituality, personality, and values. Third and more importantly, there is no face-to-face correspondence between the five personality factors and the 10 types of values with regard to their content. Not all of what constitutes personality is translated into values and not all values are related to the five factors. The general question then of the present and previous studies whether personality or values better predict third variables may be slightly contaminated by the discrepancy of content between the two sets of constructs. Further research could be helpful in clarifying this issue.

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