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**“I am agnostic, not atheist”: The role of open-minded, prosocial, and believing
dispositions**

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Abstract

Does agnosticism versus atheism reflect only epistemic or deeper personality and other individual differences? Following Karim and Saroglou (2023; Belgium), we investigated this question among 537 UK adults, self-identified as Christian, agnostic, or atheist. Agnostics were midway between religionists and atheists on prosocial dispositions (agreeableness, belief in world's benevolence), outcomes of intuitive thinking (paranormal beliefs, religiosity), and non-theistic forms of spirituality; and showed greater openness to experience and weaker convictional self-identification than atheists. Personality uniquely, beyond religious socialization, predicted agnosticism versus atheism. Spirituality denoted, across all three groups, connectedness with the world, interest in the paranormal, and life satisfaction; among nonbelievers, personal belief in a just-world; and prosocial dispositions and openness to experience among agnostics and Christians but not atheists.

Keywords: Personality, Prosociality, Beliefs, Atheism, Agnosticism

“I am Agnostic, not Atheist”: The role of open-minded, prosocial, and believing dispositions

Why do many people who do not endorse religious beliefs and practices not consider themselves atheist but self-identify as agnostic? At least in the secularized European countries and the US, agnostics represent an important portion of nonbelievers or the nonreligious (European Commission, 2019; Pew Research Center, 2019). Beyond a seemingly pure epistemic difference—agnostics not knowing whether God/a Transcendence exists, while atheists affirming God/a Transcendence does not exist, there may exist deeper psychological differences, in terms of personality, cognition, other types of beliefs, and spiritual interests.

Emerging research in various secularized European countries indicates that agnostics differ from atheists on ideological and (socio)cognitive variables. Compared to atheists, agnostics are more uncertain and ambivalent nonbelievers, more open to various kinds of beliefs (spiritual, paranormal), and rely less heavily on science and analytic thinking (Lindeman et al., 2019, 2020; Pedersen et al., 2018; Schnell et al., 2023). A recent study in Belgium investigated deeper personality differences that suggested a variety of underlying dispositions and possible motives for agnosticism. Compared to atheists and religionists, agnostics were found to be more neurotic (“neurotic agnosticism”) and less dogmatic/more open-minded (“intellectual explorative agnosticism”); and compared to atheists, agnostics were, like religionists, more prosocial (“socially warm agnosticism”). These three dispositions, neuroticism, prosociality, and open-mindedness, each predicted being agnostic versus atheist, uniquely and additively to pro-spiritual attitudes (“spiritual agnosticism”) and past religious (family) socialization (“religious residue agnosticism”). Finally, strong self-identification as atheist, but not as agnostic, was positively related to analytic thinking and emotional stability but also dogmatism (Karim & Saroglou, 2023).

The present study aims to partly (1) replicate the last study carried out in Belgium but in the context of another secularized European country (UK) and (2) with different operationalizations of constructs, and to partly (3) extend and nuance it through new, deeper, questions regarding some constructs. Regarding the first objective, we examined whether differences between agnostics and atheists found in Belgium are replicable to another, relevant for comparison, European country. UK shares with Belgium a long history of secularism and organized atheism but also presents some notable differences. The Anglican, compared to the Catholic, Christian tradition has presumably been less hierarchical, more liberal, and less oppositional to modernity. Perhaps consequently, Belgian atheism has historically been marked by strong anti-clerical sentiment, whereas, in the UK, atheism has importantly been nurtured by the science vs. religion conflict. Furthermore, Belgian constitution imposes full neutrality toward all convictions and partly restriction of religion to the private sphere, whereas, in the UK, Anglicanism remains the State's predominant religion. It may thus be important to examine whether agnostics–atheists differences are also present or possibly less pronounced in the cultural context of the UK.

With regard to the second and third objectives, we introduced several changes and additions. First, we investigated the “neurotic agnosticism” idea through another personality instrument and extended the hypothesis to life satisfaction. Second, we extended the investigation of personality differences to all big five personality traits, which allowed to also test the “exploratory agnosticism” and “prosocial agnosticism” ideas through the traits of openness to experience and agreeableness. The latter idea was also investigated in terms of the feeling of oneness with others. Third, we examined agnostics-atheists differences on three different kinds of beliefs: universal beliefs (three basic world assumptions), paranormal beliefs, and religion. Finally, we aimed to deepen our understanding of the spiritual inclinations among nonbelievers, by focusing on three distinct forms of spirituality, one

marked by the belief in a transcendence, and the other two, immanent ones, where the source of the meaning in life is either humanity or nature.

There may be several kinds of nonbelievers and nonreligious (e.g., Silver et al., 2014), and there exists some variability between spiritual and non-spiritual nonreligious people (Johnson et al., 2018). However, there is not yet a definitive typology of nonbelievers and even less an established pattern of different underlying personality differences, since psychological research on nonbelievers is in its beginning. Nevertheless, the distinction between agnostics and atheists seems to be the clearest one; people have distinct stereotypes about them (Bergstrom et al., 2022); the two groups constitute the large majority of nonbelievers in European surveys (European Commission, 2019); and no third category emerges when nonbeliever participants are given the possibility to choose and specify “other” (Uzarevic et al., 2017, 2020).

In line with several of the recent studies cited above, we thus compared three convictional groups, i.e., religionists (Christians), agnostics, and atheists. This allows for the testing of not only whether agnostics differ from atheists on the hypothesized individual differences, but also whether nonbelievers overall are different from religionists or whether agnostics are located, at least for some constructs, midway between religionists and atheists, as suggested in several of the above studies. In line with Karim and Saroglou (2023), we examined group differences at the mean level, but also differences in the personality and other correlates of the strength of self-identification as Christian, agnostic, or atheist. We will detail below the specific hypotheses and the respective rationale.

Personality Differences

Agnostics seem to be hesitant non-believers, a sort of “closet atheists”. In fact, agnostics may combine two sources of emotional instability: nonbelief, like atheists and unlike religionists, and uncertainty, unlike both religionists and atheists. Indeed, overall,

beyond moderating factors that make the picture more complex, previous research suggests a slight global difference between the religious and the nonreligious in terms of emotional stability and life satisfaction, which are in favor of the former (Yaden et al., 2022), an effect due specifically to current belief rather than religious socialization (Saroglou et al., 2020). Also, some research suggests that the highly religious as well as the highly irreligious benefit, in terms of emotional stability and well-being, from their certainty in beliefs, whereas those in the middle, religious doubters or non-believer doubters, marked by uncertainty, seem to be lower in emotional stability and well-being (Baker et al., 2018; Galen & Kloet, 2011). We thus expected agnostics to be lower, compared to religionists and atheists, on *neuroticism* and *life satisfaction*.

At the same time, as equidistant and neutral, agnostics may be open to various, even contrasting, ideas and values, and may be highly explorative in asking questions, for instance regarding the big existential enigmas, instead of searching for answers. All these features are at the heart of the broader personality trait of openness to experience. On the basis also of previous research indicating that agnostics score lower in dogmatism (Lindeman et al., 2020; Schnell et al., 2023) and higher in curiosity (Karim & Saroglou, 2023), we hypothesized agnostics to be the highest, among the three convictional groups, even compared to atheists, on *openness to experience*.

Furthermore, by being open to, interested in, and not clearly rejecting ideas and people from either side, i.e., religion and atheism, agnosticism may reflect a prosocial, other-oriented global disposition. Previous extensive research shows that religious people, compared to the non-religious, tend to be more prosocial in values, emotions, and self-perceptions, and under certain conditions and with some limitations, in behavior too (Saroglou, 2013). Yet, agnostics, for the above reasons, may be more prosocially oriented compared to atheists. In the present study, we included two indicators of prosocial dispositions: the personality trait of

agreeableness and the feeling of oneness, i.e., feeling close to others in general. In line also with initial previous evidence (Karim & Saroglou, 2023), we expected agnostics to be higher than atheists on *agreeableness* and *feeling of oneness*, implying a midway position between atheists and Christians.

In sum, we had specific hypotheses regarding three of the big five personality traits, i.e., neuroticism, agreeableness, and openness to experience. No differences were expected between agnostics and atheists on the other two personality traits, i.e., extraversion and conscientiousness. Extraversion is not a personality factor where notable differences as a function of high versus low religiosity are typically observed—it is only the case with some religious forms, in some religious contexts (Saroglou, 2017). There is also no theoretical argument to postulate differences between agnostics and atheists on extraversion—except indirectly if one considers extraversion as a reflection of positive emotionality. Similarly, though the highly religious seem to be overall more conscientious than those low in religiosity or the nonreligious (Saroglou, 2017), we do not see theoretical or empirical reasons to postulate differences between agnostics and atheists on this personality dimension.

Differences on Various Beliefs

Religious people differ from nonreligious people not only in religious beliefs, but also in two other kinds of beliefs: (1) universal ones, also known as basic world assumptions, and (2) socially and logically questionable ones, i.e., paranormal beliefs. Specifically, regarding the former, evidence favors the idea of a positive association between religiosity and several basic world assumptions, i.e., beliefs in the benevolence of the world and people, in life's meaningfulness, and in a just-world (Lerner, 2000; Van Cappellen et al., 2018). In other words, religiosity is accompanied by a strong emphasis on the idea that there is meaning and order in the world and in life and that people and the world should be trusted. Regarding the later, two empirical trends have been documented: a linear relationship between religiosity

and paranormal beliefs, or an inverted-U relationship, with the very religious and the very nonreligious scoring low, since their respective worldviews and associated beliefs oppose, for different reasons, paranormal beliefs (Wilson et al., 2018).

On the basis of previous research (Karim & Saroglou, 2023; Lindeman et al., 2019) indicating that agnostics are not totally opposed to religious ideas and values, and thus, we presume, basic world assumptions, and that agnostics are slightly less analytic and more intuitive thinkers compared to atheists, we privileged the expectation that agnostics should be located midway between religionists and atheists in all the above kinds of beliefs. These included basic world assumptions (here *belief in world's benevolence*, in *people's benevolence*, and in a *just world*), *paranormal beliefs*, and *religiosity*.

Differences on Spirituality

The psychological role and significance of spirituality potentially present in the lives of nonbelievers is an intriguing research question. This is especially the case not only because modern spirituality is often non-religious, i.e., independent from traditional religious beliefs, practice, and institutions, but also, because modern spirituality is often immanent and not transcendent, with the sources of meaning and personal force deriving from the existing and observable reality (but see Hood, 2002, for a transcendental mysticism orientation). Recent work and operationalization of the construct by Westbrook et al. (2018) distinguished between a traditional theistic spirituality (implying the belief in a deity), a non-theistic but still transcendent type of spirituality (a sense of oneness with something distinct from the physical universe), and two forms of immanent spirituality where the sources of meaning and personal force are humanity and nature.

Beyond the intuitive hypothesis that agnostics should fall midway between religionists and atheists on spirituality in general and that referring to a Transcendence in particular, it is of interest to investigate whether there may be differences between agnostics and atheists on

immanent spirituality, be it related to humanity or nature. Intuitively, to the point that both agnostics and atheists do not endorse a transcendence, there is no reason to expect the two groups to differ in their propensity for immanent forms of spirituality. In other words, conceptually, immanent spiritual dispositions and agnosticism/atheism should be orthogonal to each other. We exploratorily investigated this question. It could also be, given the hypothesized personality and other individual differences, that spirituality reflects different, for agnostics and atheists, personality dispositions and underlying motives. Initially comparative correlational evidence indicates that spirituality, among both agnostics and atheists, reflects low dogmatism and high prosocial orientation, and, additionally, among agnostics, social and cognitive curiosity (Karim & Saroglou, 2023).

Method

Participants

Participants were 547 adults residing in the UK, recruited through Prolific Academic. They self-identified in our study as Christian (172, 31.4%), atheist (200, 36.6%), or agnostic (165, 30.2%). Ten participants, in addition to the 547, reported belonging to other religions or simply reported “other” and thus were not retained for the analyses. The above three self-identifications, as declared and retained in the present study, overall corresponded to participants’ prior self-identifications when preregistered in the system; only few current nonbelievers were previously Christians (12) and some current atheists were previously agnostics (38). In collecting data, we set the minimum number of participants for each convictional group to 150, based on previous evidence on individual differences between the three convictional groups (Karim & Saroglou, 2022; Uzarevic et al., 2017, 2021). The ratio of women was 59.4%, specifically 69.2%, 53.3%, and 57.5% for Christians, agnostics, and atheists, respectively. Age varied from 18 to 71, with mean age being 31.49 ($SD = 11.16$) and with Christians being slightly older (34.5), compared to agnostics (30.3) and atheists (29.9),

$ps < .002$. The study was advertised as an investigation of worldviews and social behavior.

The study received prior approval by the independent ethics committee of the Research

Institute of the authors' University. The data are available at

https://osf.io/gzc25/?view_only=a97e3a09d5b744089a4e99fa015bc420

Measures

Personality and Life Satisfaction

Participants were administered the Ten Item Personality Inventory (Gosling et al., 2003) measuring *extraversion*, *agreeableness*, *conscientiousness*, *neuroticism*, and *openness to experience* with two items for each personality factor. Likert scales ranged from 1 = *strongly disagree* to 7 = *strongly agree*. We also investigated individual differences in the feeling of *oneness with others* by using the Inclusion of Other in the Self Scale (Aron et al., 1992). In that measure, each participant had to select one out of seven options where two circles, one representing the self and the other representing "other people in general", varied in spatial proximity from 1 (distant from, just next to, each other) to 7 (fully overlapping). In addition, participants completed the Satisfaction with Life Scale (Diener et al., 1985), which includes five items. A sample item is: "In general, my life corresponds closely to my ideals." Reliability was satisfactory ($\alpha = .81$).

World Assumptions

Participants were administered three kinds of basic, universal, positive world assumptions: (1) belief in *the benevolence of people*, (2) belief in the *benevolence of the world*, and (3) belief in a *just world*. For the first two beliefs, we used eight items, four for each belief, from the World Assumptions Scale (Janoff-Bulman, 1989). For the third belief, we used eight items from the Personal Belief in a Just World Scale (Dalbert, 1999). For all measures, 6-point Likert scales were adopted with answers varying from 1 = *strongly disagree* to 6 = *strongly agree*. Sample items are, respectively for the three beliefs, "People

are basically kind and helpful”, “The good things that happen in this world far outnumber the bad”, and “I believe that, by and large, I deserve what happens to me”. Reliabilities were satisfactory, with Cronbach’s alphas being respectively .76, .87, and .88. An exploratory factor analysis (principal component analysis followed by varimax rotation) on the 16 total items confirmed the distinctiveness between these three beliefs and the item-specific belief correspondence, with 65% of the total variance being explained. The two former beliefs were highly intercorrelated, $r = .65$, but belief in a just world was only moderately related to the two others, $r_s = .32, .35$.

Paranormal Beliefs

In addition, participants indicated their degree of endorsement of *paranormal beliefs*, mainly belief in (1) superstition, (2) spiritualism, (3) precognition, and (4) psi, through the 15 items of the corresponding subscales of the Revised Paranormal Belief Scale (Tobacyk, 2000). (The scale measures, in addition, traditional religious belief, witchcraft, and extraordinary life forms). Sample items are respectively: “Black cats can bring bad luck”, “During altered states, such as sleep or trances, the spirit can leave the body”, “Some psychics can accurately predict the future”, and “Some individuals can levitate (lift) objects through mental forces”. For all items, answers were provided in a 7-point Likert format. Given that the four beliefs were highly intercorrelated (r_s varied from .54 to .82), we computed an aggregated score of paranormal beliefs ($\alpha = .94$).

Religion

Religiosity was measured through a widely used index of three items measuring the importance of God and the importance of religion in one’s own life, as well as the frequency of prayer (7-point scales; Cronbach’s α : .90). Following these questions, participants reported their *religious affiliation/conviction*, by answering the question: “In terms of religious convictions, which of the following the best defines you?”. The list included different

religions as well as “agnostic”, “atheist”, and “other (please specify)”. Immediately after this, we measured, as a continuous variable, participants’ degree of *convictional self-identification* with the following question: “You have just made a choice among a series of identifications [...], could you specify to what extent you endorse it or identify yourself as such?”. Proposed answers ranged from 1 = *not at all* to 5 = *very much*.

We also measured *religious trajectory* by asking participants to select one of four propositions (Saroglou et al., 2020): (1) “I grew up in a family that gave me a religious education, and today I believe in God,” (2) “I grew up in a family that gave me a religious education, but today I do not believe in God,” (3) “I did not grow up in a family with religious education, but today I believe in God,” and (4) “I did not grow up in a family with religious education, and today I do not believe in God.” Participants were then considered as socialized religious (n = 98), deconverts (n = 160), converts (n = 48), and socialized nonreligious (n = 231), respectively.

Finally, we investigated participants’ specific *belief relative to God’s existence* by using the classic question of the European Values Study, “Which one of these statements comes closest to your beliefs?”, and asking participants to choose between four options: (1) “There is a personal God, (2) There is some sort of spirit or life force, (3) I do not really think there is any sort of spirit, God or life force, or (4) I do not really know what to think.”

Spirituality

Spirituality was measured in two ways, i.e., (1) as a global orientation and (2) as having distinct sources. As a measure of *general spirituality*, we used the Spirituality Scale developed by Lindeman et al. (2012). This scale measures through eight items (5-point Likert scales) subjective, not religious, spirituality as self-identification as being spiritual and as a deep existential attitude implying connection with the universe and a greater force. Sample

items are: “I think about how my life is part of a larger spiritual force” and “Spirituality is the most profound form of existence”. Reliability in our study was satisfactory, $\alpha = .91$.

Westbrook et al. (2018) developed the Trait Sources of Spirituality Scale. This measure assesses experiences of closeness to the sacred, either within a religious tradition or outside a religious tradition. In total, 24 items measure four sources/types of spirituality, i.e., one theistic (personal God) and three non-theistic ones called transcendent, human, and nature spirituality. The latter three imply attachment to and sacredness of, respectively, a transcendent reality beyond the physical universe, humanity as a whole, and nature.

In this study, we focused on the *three non-theistic sources of spirituality*, i.e., the (*impersonal*) *transcendent* one and the two immanent ones, *human* and *nature* spirituality. Three items were selected for each source of spirituality, making a total of nine items administered (5-point Likert format scales). For transcendent spirituality, we used the wording “some sort of spirit or life force”, as in the European Values Study mentioned above, instead of “the Transcendence” as in Westbrook et al. (2018). The latter term, in the secularized context of our study, would imply a traditional religious understanding of Transcendence, close to a personal God.

The three items retained for each source of spirituality were: “My connection with [some sort of spirit or life force, Humanity, Nature] provides a sense of meaning and purpose in my life”, “My relationship with [some sort of spirit or life force, Humanity, Nature] is one of the most important parts of who I am”, and “I often seek a sense of closeness in my relationship with [some sort of spirit or life force, Humanity, Nature]”. Reliabilities were satisfactory, with Cronbach’s alphas = .92, .85, and .91, respectively for transcendent, human, and nature spirituality.

An exploratory factor analysis (principal component analysis with varimax rotation) confirmed the existence of three factors and the item-subscale correspondence, with a total of

84% of variance being explained. The three types of spirituality were distinct from each other, since they were only moderately interrelated, r s varying from .43 to .47. The global Spirituality Scale was strongly related with transcendent spirituality, $r = .70$, but only moderately with the two immanent ones, i.e., human and nature, respective r s = .36 and .43.

Results

Comparisons Between Convictional Groups

Means and standard deviations for all measures, by convictional group, are detailed in Table 1. ANOVA analyses for all variables showed significant differences on agreeableness, $\eta^2 = .026$, paranormal beliefs, $\eta^2 = .132$, strength of self-identification (as Christian, agnostic or atheist), $\eta^2 = .029$, religiosity, $\eta^2 = .539$, and all measures of spirituality, i.e., general, transcendent, human, and nature, η^2 s = .155, .152, .018, and .024 (see also Table 1). Including gender and age as covariates did not change the significance of the above effects.

Subsequent post-hoc analyses (see also Table 1) showed that religionists, compared to atheists, were higher on agreeableness, paranormal beliefs, religiosity, and spirituality in all forms, and lower in strength of convictional self-identification. In all the above variables, in terms of mean scores, agnostics were consistently located midway between religionists and atheists. The differences between agnostics and atheists were significant or marginally significant for religiosity and spirituality (all forms), with Tukey tests, as well as for agreeableness and paranormal beliefs, with the less conservative t -tests.

Religious Trajectory and its Interaction with Convictional Status

Emerging research (Saroglou et al., 2020; Van Tongeren et al., 2022) suggests personality, values, and beliefs differences between nonbelievers socialized as such and nonbelievers who have exited from religion, also called deconverted (Streib, 2021). When examining religious trajectory, distinctly by group, it turned out that Christians were often socialized as religious (52.3%), with an additional percentage being converted (22.7%).

Agnostics were mainly composed of those socialized in a non-religious environment (50.3%) and those de-converted from a prior religious environment (41.2%). Similarly, atheists were almost exclusively composed of, predominantly, those socialized as irreligious (62%) and those de-converted (36.5%). The percentages of de-converts and the socialized irreligious did not differ significantly between agnostics and atheists, $\chi^2 = 2.26, p = .15$.

To investigate whether religious trajectory adds information to our understanding of the individual differences between agnostics and atheists socialized as irreligious versus being deconverted (a total of 348 participants), we computed a series of 2 x 2 ANOVAs analyses on the variables under study. Each time, we investigated the main effects and the interaction between religious trajectory (deconversion versus irreligious socialization) and convictional group (agnostics versus atheists), and we added gender and age as covariates. The *N* by cell was 68 (deconverted agnostics), 83 (agnostic socialized as irreligious), 73 (deconverted atheists), and 124 (atheists socialized as irreligious).

These analyses first confirmed that agnostics were higher than atheists on agreeableness, paranormal beliefs, religiosity, general spirituality, and transcendent spirituality, $F_s(1,347) = 5.64, 5.59, 27.90, 18.57, 4.63, p_s = .020, .019, < .001, < .001, .032$. Respective means (and *SDs*) for agnostics and atheists were 4.74, 4.58 (1.02, 1.02) for agreeableness, 2.23, 2.02 (1.07, 1.11) for paranormal beliefs, 1.58, 1.23 (0.80, 0.49) for religiosity, 2.55, 2.20 (0.82, 0.89) for general spirituality, and 2.02, 1.82 (0.93, 1.00) for transcendent spirituality. Agnostics were also weaker self-identifiers than atheists, $F(1,341) = 12.92, p < .001, M_s = 3.26, 3.72, SD_s = 1.09, 1.21$. Second, a main effect of religious trajectory, not accompanied by an interaction, was observed for three variables: deconverted, compared to the socialized irreligious, believed less in a benevolent world, $F(1,341) = 4.20, p = .041, M_s = 4.42, 4.67, SD_s = 1.22, 1.09$, and had more positive attitudes toward spirituality

in general, $F(1,341) = 4.42, p = .036, M_s = 2.26, 2.42, SD_s = 0.83, 0.91$, and transcendent spirituality in particular, $F(1,341) = 4.65, p = .032, M_s = 1.77, 2.00, SD_s = 0.86, 1.04$.

Furthermore, significant interactions between religious trajectory and convictional status were found impacting extraversion, agreeableness, neuroticism, feeling of oneness, and religiosity, $F_s(1,341) = 5.05, 5.80, 5.20, 3.90, 5.02, p_s = .025, .017, .023, .049, .026$.

Subsequent analyses performed distinctly for agnostics and atheists showed that deconverted agnostics were more religious (in fact, less irreligious), $M = 1.79 (SD = 0.91)$, and less neurotic, $M = 3.77 (1.21)$, than agnostics socialized as irreligious, $M_s = 1.41 (0.66), 4.18 (1.36), t_s(1,149) = 1.93, 3.04, p_s = .056, .003$. Deconverted atheists, compared to socialized atheists, were lower in extraversion, agreeableness, and feeling of oneness, $t_s(1,195) = -2.28, -2.59, -3.19, p_s = .024, .010, .002$. Respective M_s and SD_s were 3.51, 3.98 (1.45, 1.35) for extraversion, 4.34, 4.73 (1.02, 0.99) for agreeableness, and 3.03, 3.70 (1.36, 1.54) for feeling of oneness.

Finally, to investigate the possibly unique and additive, with respect to religious socialization, role of personality in predicting type of nonbelief, we computed a logistic regression of the nonbelief type (agnostic versus atheist) on agreeableness, paranormal beliefs, and religious trajectory (deconverted versus socialized irreligious), and also included age and gender. (To avoid multicollinearity effects, we did not include spirituality since it was highly interrelated with paranormal beliefs, $r > .50$). The results confirmed the unique role of agreeableness, Wald statistic = 3.80, $p = .051$, paranormal beliefs, 4.24, $p = .040$, beyond religious socialization, 3.18, $p = 0.74$, and gender (women), 3.84, $p = .050$ (Nagelkerke $R^2 = .045$).

Beliefs Regarding Transcendence and Subsequent Between-Group Comparisons

Next, we investigated whether participants who self-identified as Christians, agnostics, and atheists hold views about Transcendence that fully correspond to their self-identification.

In the total sample, participants endorsed one of the four statements relative to the existence of a Transcendence: (1) existence of a personal God, (2) existence of an impersonal transcendence like spirit or life force, (3) rejection of any transcendence, or (4) hesitation on what to think. Respective *Ns* were 77 (68 Christians), 133 (64 Christians, 44 agnostics, 25 atheists), 177 (125 atheists, 42 agnostics), and 150 (74 agnostics, 46 atheists, 30 Christians).

We subsequently investigated personality and other individual differences between the three groups that correspond more strictly to the definition and distinctiveness of each of the three convictional statuses: (1) *religious (Christian) believers*, i.e., self-identified Christians who believed in a personal God or a Transcendence ($n = 68+64 = 132$), (2) *agnostic doubters*, i.e., self-identified agnostics who indeed “did not know what to think” ($n = 74$), and (3) *atheist nonbelievers* ($n = 125$), i.e., self-identified atheists who believed no God or Transcendence exists. The two subgroups of agnostics who rejected or endorsed transcendence were too small in size to be included in the comparisons. We repeated the initial ANOVA analyses (as in Table 1), focusing this time on these “purified” Christian believers, undecided agnostics, and atheist nonbelievers (see Table 2 and Figure 1).

Significant differences between the three groups were observed on agreeableness, openness to experience, feeling of oneness with others, belief in the benevolence of the world, and paranormal beliefs, as well as on all the various measures of religion and spirituality. The *Fs* remained significant or marginally significant when controlling for age and gender (no distinct by gender analyses were computed given the small *Ns* if the three groups were split by gender). They also remained significant when we controlled for the strength of convictional self-identification. Visual inspection of means and post-hoc comparisons confirmed a linear pattern with agnostic doubters being midway between religious believers (high) and atheist nonbelievers (low) on agreeableness, benevolence of the world, paranormal beliefs, and the various measures of religiosity and spirituality. To solidify this for

agreeableness and belief in benevolence of the world, where the agnostics-atheists difference was not, strictly speaking, significant (Table 2), we computed a linear contrast with Christians being high (1), agnostics in the middle (0), and atheists low (-1). This contrast was significant for both agreeableness, $F(1,329) = 11.35, p < .001, \eta^2 = .034$, and belief in the world's benevolence, $F(1,329) = 7.52, p = .006, \eta^2 = .022$. Finally, agnostics resembled atheists in being lower than religionists in the feeling of oneness with others, but resembled religionists in being lower than atheists in the degree of convictional self-identification and higher than atheists in openness to experience.

Correlates of Convictional Strength

We computed correlations between the strength of convictional self-identification and the other variables, distinctly by group (Table 3). Strongly self-identifying as Christian was associated with high agreeableness and general, transcendent, and human, but not nature, spirituality. Strongly self-identifying as agnostic did not correspond to any individual differences; but strongly self-identifying as atheist was associated with low endorsement of paranormal beliefs and low transcendent spirituality. A negative association was found between personal belief in a just world and self-identification as Christian.

Spirituality Types and Correlates

As far as the three spirituality types are concerned, human spirituality was endorsed more than nature spirituality, and this across Christians, agnostics, and atheists (see Table 1), $F(1,534) = 22.19, p < .001$. Transcendent spirituality was endorsed even less than nature spirituality by agnostics, $F(1,164) = 95.44, p < .001$, and atheists, $F(1,199) = 93.94, ps < .001$, but not by Christians, $F(1,171) = 0.67, p = .412$, who still endorsed (non-religious) transcendent spirituality less than human spirituality, $12.87, p < .001$ (see also Table 1).

We computed correlations, distinctly by convictional group, between spirituality (global, transcendent, human, nature) and the other variables (see Table 4). *Across all three*

groups, spirituality, in its global and specific forms, was unrelated to conscientiousness and neuroticism, but was positively related to *paranormal beliefs*. Moreover, across all three groups, human spirituality, but not the other forms or general spirituality, was positively related to *life satisfaction*; and human and/or general spirituality, but not nature spirituality, was related to *extraversion* and the feeling of *oneness with others*. With regard to these two variables, in addition, transcendent spirituality was related to high extraversion among agnostics and atheists and to oneness with others among Christians.

Furthermore, among *Christians and agnostics, but not among atheists*, general spirituality and/or human spirituality clearly (but not the other spirituality types) were positively related to other-oriented dispositions, i.e., *agreeableness*, belief in the *benevolence of the world*, and belief in *people's benevolence*. There was only a counter-intuitive negative association between transcendent spirituality and belief in people's benevolence among Christians. Also among Christians and agnostics, but not among atheists, general spirituality and nature spirituality (and other forms occasionally) were positively related to *openness to experience*. Finally, human spirituality was associated with *believing in a just world*, significantly among agnostics and atheists.

Discussion

The psychology of agnostics as a specific category among nonbelievers is an understudied topic. In this study, using a sizable sample of adults residing in a secularized Western European country (UK), we investigated personality and other individual differences characterizing agnostics compared to atheists and Christian religionists. The results partly replicated in another cultural context marked by a different religious tradition, history of atheism, and State-religion relationships (UK), previous research on Belgium (Karim & Saroglou, 2023), but also importantly extended and nuanced it.

Prosocial Orientation

First, extending results from a recent study in another secularized Western European country (Belgium; Karim & Saroglou, 2023), we found agnostics to be higher than atheists, and more precisely midway between religionists (high) and atheists (low), on indicators of prosocial orientation, i.e., the personality trait of agreeableness and the belief in the benevolence of the world; and agreeableness predicted agnosticism versus atheism beyond the role of prior religious socialization. These findings confirm the idea that agnostics may be nonbelievers who respect people from both convictional sides and find value in both religious and atheist worldviews. Furthermore, there were no differences on prosociality among agnostics as a function of prior religious versus irreligious socialization; this was however the case with atheists among whom the deconverted were the lowest on agreeableness—they were also the lowest on extraversion and the feeling of oneness with others. Given that lower prosocial orientation longitudinally predicts exiting from religion (McCullough et al., 2005), it may be that individuals low in prosociality, especially deconverts, become atheist and not simply agnostic when rejecting religion.

This pattern of results with agnostics being more prosocially-oriented than atheists and midway between atheists and the more prosocial religionists, was also found in terms of correlates of convictional strength and spirituality. Only strong Christian identifiers but neither strong agnostic nor atheist identifiers tended to be high in agreeableness. Furthermore, Christians and agnostics, but not atheists, with a strong interest in general or human spirituality tended to be agreeable and to believe in both the world's and people's benevolence.

Open-Mindedness

Second, in line with previous research suggesting that agnostics, compared to atheists, are less dogmatic, more open-minded, and identify less strongly with their convictional status (Karim & Saroglou, 2023; Lindeman et al., 2020; Schnell et al., 2023), the present work also

showed that agnostics had weaker self-identification as agnostic compared to atheists' self-identification as atheist. Atheists were more intense self-identifiers even compared to Christian religionists. Importantly too, when focusing on "pure" group categories, i.e., Christian believers, agnostics who were indecisive about the (non)existence of a transcendence, and atheists who clearly rejected transcendence, the latter turned out to be lower than the two other groups on the personality trait of openness to experience. Finally, spirituality in general or through various non-theistic forms, in line with research showing a positive association with openness to experience (Saroglou, 2017), was indeed positively related to this personality dimension. Nevertheless, this was the case among Christians and agnostics, but not among atheists.

The above pattern of findings confirms the idea of higher flexibility of agnostics. It also consolidates emerging research indicating that, in secularized European countries where atheism is becoming mainstream and religion is no longer broadly normative, atheists may not necessarily be the most open-minded (Gebauer et al., 2014) and tend to discriminate those who endorse beliefs and worldviews contrary to their own (Uzarevic et al., 2020, 2021).

Paranormal Beliefs and Religiosity

Third, agnostics were located midway between Christians (higher) and atheists (lower) on endorsing paranormal beliefs. Overall, the mean scores were low, suggesting rejection of paranormal beliefs among participants, but this rejection was strong for atheists, weaker for agnostics, and much weaker for religionists. This extends previous research indicating that agnostics seem closer to atheists than to religionists but still midway on analytic thinking and pro-science attitudes (Karim & Saroglou, 2023; Lindeman et al., 2019; Schnell et al., 2023). The differences on paranormal beliefs were present between the three groups be they defined on the basis of self-identification, or more strictly considered, on the basis of God beliefs (existence, non-knowledge, non-existence). The differences between the three groups were

due to the current convictional status and not to prior religious or irreligious (family) socialization. The midway location of agnostics between the two other groups on paranormal beliefs paralleled group differences in attitudes toward religion, known to be accompanied, like paranormal beliefs, by a tendency for intuitive over analytic thinking (Yilmaz, 2021). Finally, strong identification as atheist, but not strong identification as agnostic, reflected rejection of paranormal beliefs—and, similarly, of transcendent spirituality.

Immanent Spirituality

A final series of findings concerns the role of spirituality among agnostics compared to atheists and religionists. First, agnostics were midway between Christians (higher) and atheists (lower) in spirituality, be it general spirituality, an impersonal transcendent one, or an immanent one, i.e., human and nature spirituality. Second, across all three groups, nature spirituality was endorsed less than human spirituality. A possible interpretation of this difference is that a feeling of deep connection with nature can be a source of spirituality for some but not all (secular) people, whereas the connection with all humans and the world is a basic, possibly universal, component of spirituality (Piedmont, 1999). Third, not surprisingly, transcendent spirituality, i.e., a non-immanent form but not strictly referring to a personal God, was to some extent valued by religionists but was significantly the lowest among the irreligious, agnostics or atheists.

Finally, when synthesizing the various correlates of spirituality across the three convictional groups, it appeared first, as evoked above, that the other-oriented, prosocial, dimension of spirituality characterizes the spirituality of Christians and agnostics, but not that of atheists (see also Karim & Saroglou, 2023, for a similar agnostics-atheists difference regarding social curiosity). Similarly, it was among Christians and agnostics, but not atheists, that spirituality clearly reflected openness to experience (see also Karim & Saroglou, 2024, where spirituality was related to open-mindedness in both agnostics and atheists but to joyous

exploration only among agnostics). However, across all three groups, including atheists, spirituality reflected: (1) some global connectedness with the world, considering the several significant correlations with extraversion and the feeling of oneness; (2) interest in paranormal belief, possibly suggesting some inclination toward an intuitive and holistic thinking style; and (3) life satisfaction (related to human, but not other, types of spirituality). Among nonbelievers, spirituality was positively associated with a personal belief in a just-world.

It sum, across believers and nonbelievers, spirituality, in particular human spirituality, has an extraverted dimension of connectedness with the world and possibly a holistic perception of the world that sustains paranormal belief. Across non-religionists, it has an additional intra-individual dimension of personal coherence that enhances the self (we measured personal belief in a just world, not belief in a just world for others). Across Christians and agnostics, but not atheists, it has an additional interpersonal, other-oriented, dimension. Possibly for all of these reasons, partly varying across groups, spiritual people of various convictional statuses seem to be rather satisfied with their lives.

Limitations and Future Questions

Beyond this series of meaningful and coherent findings, there were also some null findings. Unlike in Karim and Saroglou (2023), agnostics were not found to be higher in neuroticism than the other convictional groups—and subsequently lower in life satisfaction. It may be that the TIPI two-item measure of neuroticism cannot easily capture the extent of the construct (see AUTHORS for a recent study confirming the” neurotic agnosticism” hypothesis with a multi-item measure of neuroticism). Furthermore, belief in the benevolence of people was meaningfully correlated with spirituality but failed to provide significant between-group differences, whereas this was the case with the proximal belief in the benevolence of the world. Finally, personal belief in a just world for self, among Christians,

was unrelated to spirituality and even negatively related to strength of identification. It may be that, beyond a global positive association between religiosity and the just-world belief shown in early research (Lerner, 2000), specific aspects of this belief, for instance just world for self versus for others, or immanent versus ultimate justice, depend on specific religious forms rather than religiosity in general (Kaplan, 2012; Pichon & Saroglou, 2009).

It is also important to mention here a precaution regarding the generalizability of the findings. The present study, as most of the recent studies in the psychology of various types of nonbelief/irreligion mentioned in the Introduction, was carried out in a secularized Western European country—additionally a country with its own Christian heritage and history of atheism. It is thus of interest to investigate whether the results apply to other Western and non-Western and non-Christian cultural contexts, especially in more traditional and religious countries where the ratios of nonbelievers, atheists and agnostics, are much lower. Similarly, in some cultural contexts with important normative pressure to be religious, self-identifying as agnostic rather than as atheist may partly be due to social desirability and reputation concerns and thus denote partly different personality characteristics of agnostics.

Nevertheless, taken as a whole, the results of the present work present a coherent pattern that solidifies and extends our knowledge of the psychological characteristics of the major forms of nonbelief. Overall, agnostics seem to be, from a personality psychological perspective, a specific group, not reducible to atheists or to skeptical believers. Their agnosticism reflects deeper personal dispositions than simply an epistemic stand (“I do not know” or “we cannot know” “whether God exists or not”).

Furthermore, as mentioned in the Introduction, a previous study suggested variability of personal dispositions behind agnosticism, mainly a neurotic, a socially warm, an explorative, a spiritual, and/or a religious residue agnosticism (Karim & Saroglou, 2023). The present work, except for neuroticism, confirms the prosocial, open to experience, pro-

spiritual, and religious residue dimensions behind agnosticism. Agnostics do not seem to be reducible to closet atheists. Moreover, future research should deepen our understanding of the similarities and differences between the various types of believers and nonbelievers on how spirituality functions in people's lives.

Finally, extensive research, mostly longitudinal one, has investigated whether it is personality dispositions, in interaction with the presence of (ir)religion in the social context, that push some people to be--remain or become--religious or nonreligious, or whether it is religion through its beliefs, rituals, norms, and group (and we can assume atheism too, as an organized worldviews) that shapes people's personality (Saroglou, 2017, for review; see also Etringer et al., 2023). In line with that research, it seems promising to investigate in future research whether, longitudinally, certain personal dispositions push several people, when they are or become nonbelievers, to choose agnosticism over atheism. Regarding the opposite causal direction, we anticipate less likelihood for agnosticism to shape people's personality since agnosticism, unlike religion and atheism, does not seem to constitute an organized belief/practice system or worldview.

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We have no competing interests.

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Table 1

Descriptive Statistics for All Variables, by Convictional Group, and Comparisons Between Groups (Defined by Self-Identification)

	Christians	Agnostics	Atheists	Comparisons	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i>	Post-hoc
Personality					
Extraversion	3.86 (1.33)	3.72 (1.37)	3.81 (1.40)	0.42	
Agreeableness	4.97 (1.05)	4.75 (1.02)	4.57 (1.02)	6.99***	1 > 3***, 2 > 3†
Conscientiousness	5.13 (1.16)	5.04 (1.14)	5.05 (1.23)	0.31	
Neuroticism	3.93 (1.34)	4.03 (1.31)	3.93 (1.36)	0.33	
Openness to exp.	4.95 (1.01)	4.96 (1.00)	4.87 (0.97)	0.41	
Oneness w. others	3.73 (1.65)	3.37 (1.31)	3.44 (1.50)	2.71	
Life satisfaction	3.44 (0.73)	3.35 (0.81)	3.38 (0.89)	0.57	
World assumptions					
Benevolent world	4.75 (1.41)	4.64 (1.13)	4.55 (1.18)	1.41	
Benevolent people	4.56 (0.91)	4.65 (0.88)	4.56 (0.92)	0.62	
Just world-personal	3.85 (0.84)	3.92 (0.80)	4.00 (0.84)	1.56	
Paranormal beliefs	3.09 (1.17)	2.26 (1.07)	2.06 (1.17)	40.61***	1 > 2&3***, 2 > 3†
Religion/Conviction					
Religiosity	4.24 (1.76)	1.77 (1.06)	1.25 (0.56)	312.08***	1 > 2&3***, 2 > 3***
Strength of identif.	2.98 (1.17)	3.24 (1.06)	3.70 (1.22)	18.47***	3 > 2&1***
Spirituality					
General	3.13 (0.94)	2.60 (0.84)	2.21 (0.90)	49.08***	1 > 2&3***, 2 > 3***
Transcendent	2.87 (0.12)	2.09 (0.96)	1.84 (1.02)	47.73***	1 > 2&3***, 2 > 3†
Human	3.16 (0.92)	3.09 (1.02)	2.86 (1.06)	4.79**	1 > 3***, 2 > 3†
Nature	2.94 (1.03)	2.92 (1.09)	2.58 (1.14)	6.49**	1 > 3***, 2 > 3*

Note. *N*s = 172 (Christians), 165 (agnostics), and 200 (atheists). Post-hoc comparisons are Tukey tests, and, when in italics, *t*-tests.

* $p < .05$. ** $p < .01$. *** $p < .001$. † $p < .10$ (two-tailed)

Table 2

Descriptive Statistics for All Variables, by Convictional Group, and Comparisons Between Groups (Defined by Self-Identification and Belief in Transcendence)

	Christian	Agnostics	Atheist	Comparisons		
	believers	indecisive	nonbeliev.	$F(2, 328)$	η^2	Post-hoc
	$M (SD)$	$M (SD)$	$M (SD)$			
Personality						
Extraversion	3.87 (1.28)	3.73 (1.43)	3.67 (1.39)	0.72	0.00	
Agreeableness	5.06 (1.03)	4.80 (0.99)	4.62 (1.03)	5.73**	0.03	<i>1 > 2†, 1 > 3**</i>
Conscientiousness	5.13 (1.94)	5.05 (1.82)	5.08 (1.89)	0.12	0.00	
Neuroticism	3.90 (1.30)	4.04 (1.35)	3.81 (1.30)	0.73	0.00	
Openness to exp.	5.05 (1.04)	5.08 (1.04)	4.76 (0.95)	3.49*	0.02	<i>1 > 3†, 2 > 3†</i>
Oneness w. others	3.78 (1.64)	3.27 (1.42)	3.34 (1.46)	3.78*	0.02	<i>1 > 2†, 1 > 3†</i>
Life satisfaction	3.49 (0.71)	3.32 (0.82)	3.33 (0.90)	1.70	0.01	
World assumptions						
Benevolent world	4.85 (1.16)	4.65 (0.85)	4.51 (0.92)	3.76*	0.02	<i>1 > 3*</i>
Benevolent people	4.63 (0.92)	4.61 (0.85)	4.51 (0.92)	0.67	0.00	
Just world	3.85 (0.87)	3.92 (0.82)	3.95 (0.85)	0.40	0.00	
Paranormal beliefs	3.22 (1.14)	2.19 (0.98)	1.62 (0.91)	80.83***	0.33	<i>1 > 2***, 2 > 3***</i>
Religion/Conviction						
Religiosity	4.68 (1.62)	1.61 (0.82)	1.11 (0.33)	369.69***	0.69	<i>1 > 2**, 2 > 3**</i>
Strength of ident.	3.27 (1.13)	3.31 (1.15)	3.99 (1.10)	15.41***	0.09	<i>1 < 3***, 2 < 3***</i>
Spirituality						
General	3.35 (0.85)	2.46 (0.75)	1.84 (0.65)	127.37***	0.44	<i>1 > 2***, 2 > 3***</i>
Transcendent	3.11 (1.07)	1.85 (0.87)	1.57 (0.83)	93.79***	0.36	<i>1 > 2***, 2 > 3*</i>
Human	3.34 (0.90)	3.08 (1.04)	2.70 (1.07)	13.23***	0.07	<i>1 > 2†, 2 > 3*</i>
Nature	3.05 (1.00)	2.91 (1.12)	2.43 (1.07)	11.63***	0.07	<i>1 > 3***, 2 > 3**</i>

Note. $N_s = 132$ (Christian believers), 74 (agnostics undecided), and 125 (atheist nonbelievers).

Post-hoc comparisons are Tukey tests, and, when in italics, *t*-tests.

* $p < .05$. ** $p < .01$. *** $p < .001$. † $p < .10$ (two-tailed)

Table 3

Correlations Between the Strength of Convictional Self-Identification and the Other Individual Differences, Distinctly by Group

	Strength of self-identification as		
	Christian	Agnostic	Atheist
Personality			
Extraversion	-.11	-.02	-.07
Agreeableness	.22**	.03	-.02
Conscientiousness	.01	-.06	-.07
Neuroticism	-.08	-.09	.02
Openness to exp.	.07	.06	.09
Oneness w. others	.08	-.09	-.07
Life satisfaction	-.10	.03	.00
World assumptions			
Benevolent world	-.05	-.13	-.06
Benevolent people	-.13	-.03	-.05
Just world-personal	-.17*	.04	-.09
Paranormal beliefs	-.03	.04	-.17*
Spirituality			
General	.43***	.05	-.12
Transcendent	.48***	.07	-.14*
Human	.20**	.06	.05
Nature	.06	.12	-.03

Note. $N_s = 172$ (Christians), 165 (agnostics), and 200 (atheists).

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Table 4*Correlations Between Spirituality and the Other Individual Differences, Distinctly by Group*

Individual differences	Groups	Spirituality			
		General	Transcendent	Human	Nature
Personality					
Extraversion	Christians	-.11	-.07	.15*	-.03
	Agnostics	.10	.18*	.30***	.09
	Atheists	.15*	.18**	.14*	-.07
Agreeableness	Christians	.16*	.14	.16*	.06
	Agnostics	.18*	.09	.25**	.18*
	Atheists	.07	.02	.06	.06
Conscientiousness	Christians	-.05	-.10	.07	-.04
	Agnostics	.02	.05	.08	-.03
	Atheists	-.02	.08	-.05	-.10
Neuroticism	Christians	.14	.08	-.09	.08
	Agnostics	.05	-.01	.01	.14
	Atheists	.14	-.05	-.02	.11
Openness to exper.	Christians	.17*	.18*	.11	.17*
	Agnostics	.18*	.12	.24**	.26***
	Atheists	.11	.10	.07	.06
Oneness w. others	Christians	.15*	.16*	.38***	.13
	Agnostics	-.01	.02	.31***	.10
	Atheists	.19**	.05	.14	-.07
Life satisfaction	Christians	-.03	.03	.26***	.00
	Agnostics	-.03	.05	.23**	.03
	Atheists	.06	.12	.19**	.02
World assumptions					
Benevolent world	Christians	.08	.01	.29***	.12
	Agnostics	.13	.15*	.35***	.07
	Atheists	.11	.10	.11	.05
Benevolent people	Christians	.03	-.16*	.20**	-.02
	Agnostics	.25***	.14	.35***	.14

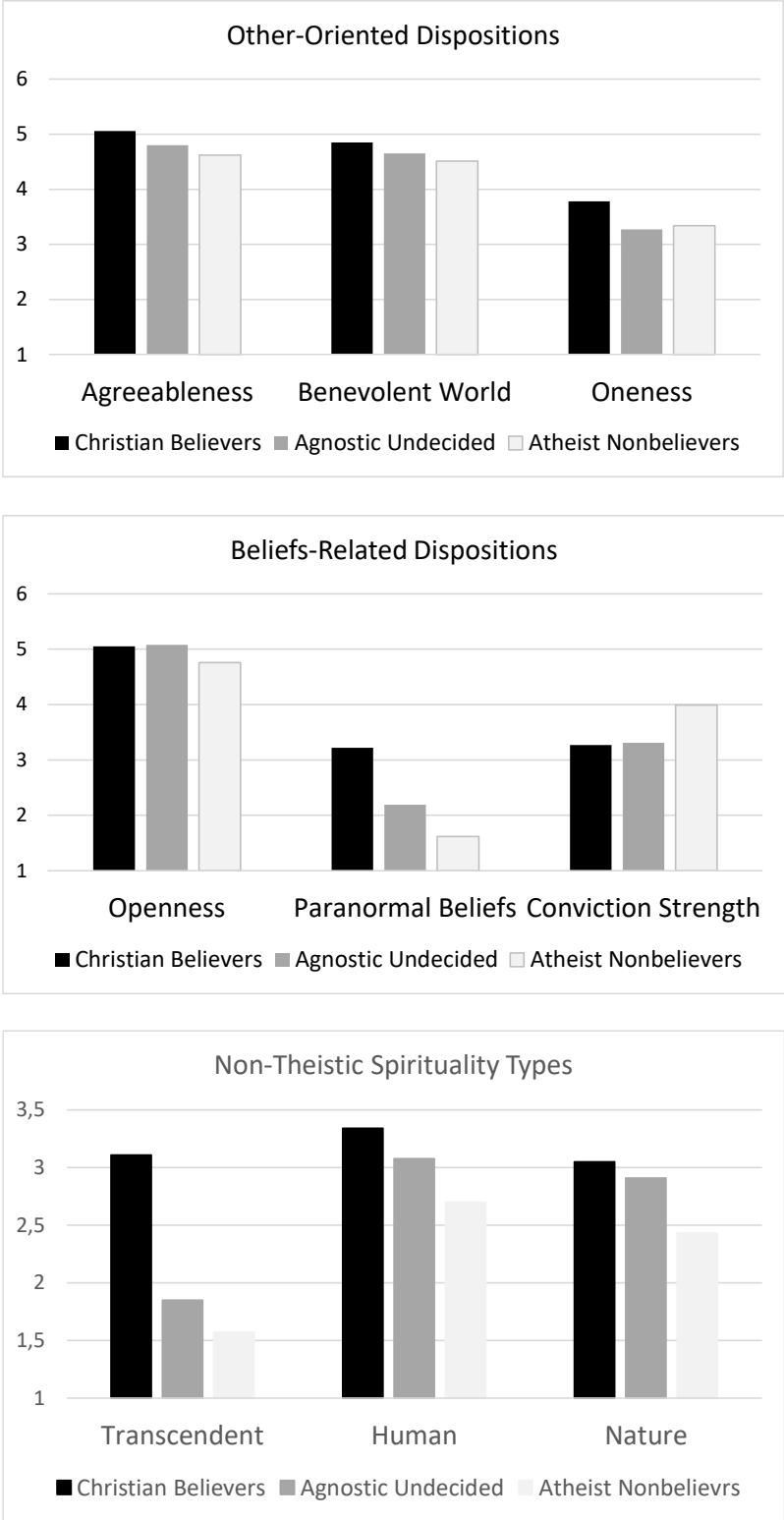
	Atheists	.09	-.02	.08	.09
Just world-personal	Christians	-.06	-.14	.12	-.06
	Agnostics	-.02	-.01	.15*	-.02
	Atheists	.08	.14*	.15*	.07
Paranormal beliefs	Christians	.36***	.33***	.30***	.30***
	Agnostics	.42***	.47***	.12	.15*
	Atheists	.55***	.50***	.21**	.20**

Note. $N_s = 172$ (Christians), 165 (agnostics), and 200 (atheists).

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Figure 1

Means Scores on Personality (Top), Beliefs (Middle), and Spirituality (Bottom), by Convictional Group



Note. $N_s = 132$ (Christian believers), 74 (agnostics undecided), and 125 (atheist nonbelievers).