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The Interplay between Religiosity and Horizontal and Vertical Individualism-Collectivism among Polish Catholic Students

Abstract: Individualism-collectivism has emerged as one of the most important constructs to depict cultural differences and similarities. It is typical to examine individualism and collectivism through comparison between the cultures of the West and those of the East or comparison between various religious traditions, e.g. Christianity has been seen as the source of Western individualistic understanding whilst Buddhism as the source of Eastern collectivist understanding. The research presented in this paper explored the connections between individualism-collectivism and religiosity in Polish Catholic culture. Although Poland is an orthodox Catholic environment, gradually intensified secularization processes have been observed there. In two separate studies we examined relationships between individualism-collectivism and religiosity defined in a traditional (study 1) and secularized context (study 2).

Key words: individualism-collectivism, post-critical beliefs, centrality of religiosity

Introduction

Individualism-collectivism (I-C) has emerged as one of the most important constructs to depict cultural differences and similarities. It is typical to examine individualism and collectivism through comparison between the cultures of the West, presumed to reflect individualism, and those of the East, presumed to reflect collectivism (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002; Sampson, 2002). Religions also, since they promote particular sets of values and attitudes, have been categorized as individualist or collectivist (Bakan, 1966). Christianity, for example, has been seen as the source of Western individualistic understanding (Weber, 1906/1958) whilst Buddhism – the source of Eastern collectivist understanding (Ho, 1995).

Although most of the studies on I-C have been aimed at examining cross-cultural differences in the individualism-collectivism dimension, there are researchers (e.g. Cukur, de Guzman & Carlo, 2004; Kagitcibasi, 1997; Oyserman et al., 2002; Peng, Nisbett & Wong, 1997) who have suggested a need to take a closer look at the various

aspects of I-C within cultures. This approach makes it possible to show the potential underlying factors that might account for group differences and allows the use of multidimensional indices to capture various components of religiosity (Cukur et al., 2004).

In the present study we examined the constructs of I-C and religiosity in a Polish sample. Polish religiosity is a complex phenomenon. On the one hand, Poland is an orthodox Catholic environment, characterized by considerable traditionalism in the religious and axiological field (Zarzycka, 2009). On the other hand, processes of gradually intensified secularization have been observed, followed by a progressive increase in selectivity in interpreting the meaning of religion in the socio-cultural field (Mariański, 2011; Śliwak & Zarzycka, 2013; Zarzycka, 2009). Consequently, carrying out a study in a Polish sample, may not only furnish interesting data coming from a geographical area not well represented in English publications but also makes it possible to grasp various aspects of religiosity and their connections with I-C.

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Religiosity in a Traditional and Secularized Context

Religiosity has been identified as a significant socio-cultural factor in predicting individual differences in various aspects of personality and behavior (e.g. Hood, Hill, & Spilka, 2009). Religiosity manifests itself in Poland in a specific manner. On the one hand, 95 percent of adults are Roman Catholic believers. One-third of all Catholics pray regularly (e.g., at least once a day) and over half (53%) follow religious practices systematically. On the other hand, cultural and social changes and increasing secularization modify the way religion is perceived, consisting mainly in the shift from institutionalized, Church-oriented religiosity to subjective religiosity which answers subjective needs of an individual (Marianiński, 2011). Most Catholic Poles (61%) do not accept the norms advanced by the Church's teachings on sexuality, and this is also true for a number of the basic tenets of the Church's social teachings (Bilska-Wodecka, 2009). For example 89 percent Poles say their religious affiliation does not influence their political opinions (Maik, 2012; Zarzycka, 2008, 2009). Thus Polish Catholicism is in tension between traditional teaching of the Church and progressing secularization processes. As a result, there is a need to describe it as a multi-dimensional social fact.

In a traditional sense, religiosity can be defined in terms of its centrality and importance in people's lives and frequency of religious behavior and practice. Huber's (2003; Huber & Huber, 2012) model of centrality of religiosity is an example of this approach. Wulff's (1991, 1999) concept of religious cognitive styles can be an example of how to describe religion in a secularized socio-cultural context.

Religiosity in a traditional context

The religiosity model devised by Huber (2003) refers to the Allport's (Allport & Ross, 1967) and Glock's (Glock & Stark, 1965) conceptions. Allport (Allport & Ross, 1967) described the motivational dynamics involved in religiosity. He distinguished between intrinsic and extrinsic religious orientation (Allport, 1966; Allport & Ross, 1967). An intrinsically oriented person considers religion as an ultimate end in itself. Religious beliefs and values are internalized, moreover, other needs and goals are accommodated, reorganized and brought in harmony with these religious contents (Allport, 1966). In contrast, an extrinsically oriented individual approaches religion in a utilitarian or instrumental fashion: it helps one to attain self-centered ends, such as safety, solace, or sociability. Glock & Stark (1965) defined religiosity as a multidimensional structure defined by five dimensions: intellectual (knowledge), ideological (belief), ritualistic, experiential and consequential. In 1968, Stark & Glock eliminated the consequential dimension from the model and split the ritualistic dimension into public (ritual) and private practice (devotion), thus maintaining five dimensions. Huber (2003) suggested expressing the motivational religiosity dynamics by means of terms present in the Kelly's (1955) conception of personal constructs. Referring to Kelly's (1955) personality theory a personal construct

is a pattern for the anticipation of events. Accordingly, the personal system of religious constructs can be defined as a superstructure in personality which consists of all personal constructs related to the individually defined realm of religion and religiosity. A personal religious construct is activated when the individual anticipates something with a religious meaning. In relation to this approach, the five core-dimensions can be seen as channels in which personal religious constructs are activated (Huber & Huber, 2012). In Huber's model Centrality is the measure of the position of religious construct in the system of personal constructs and five dimensions by Glock (Glock & Stark, 1965) – intellectual, ideological, experiential, public practice and private practice – are the dimensions of contents of religiosity.

Religiosity in a secularized context.

Cultural and social changes and increasing secularization have revealed a large number of issues relating to religion that do not fit into the traditional research paradigm (Ricoeur, 1970). Openness to diversity of cultures, religions and ethical systems are attributes of the modern world. Syncretic tendencies, in which a wealth of various ideas on faith and religion is sometimes bundled together, are characteristic of attitudes towards religion (see Duriez, Fontaine & Hutsebaut, 2000). Also in Poland, in an emerging pluralistic society, an increase in the processes of faith secularization and individualization is apparent. Furthermore, the significance of the folk Church is decreasing. There is also development of so called new spiritualities visible, which are an expression of the shift from institutionalized religiosity to a religiosity which is privatized and which responds to subjective needs (Marianiński, 2011).

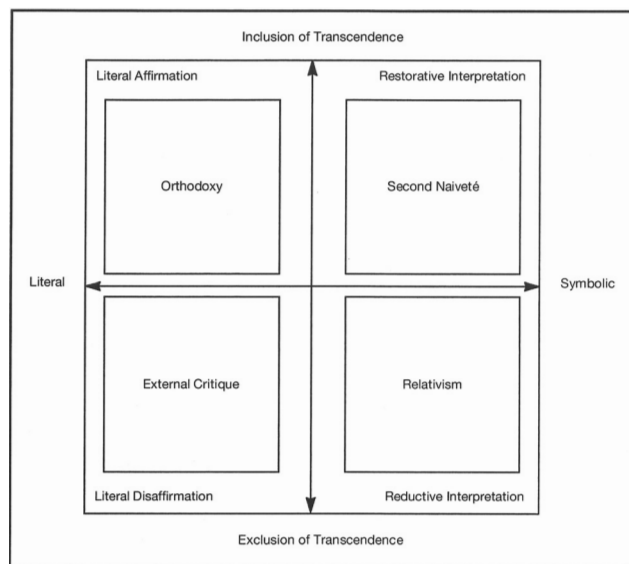
In context of the existing diversity of attitudes towards religion, David Wulff (1991) developed a new and interesting perspective on religion – an analysis of religious cognitive styles. According to Wulff (1999) various possible attitudes towards religion can be positioned in a two-dimensional space (see Figure 1). The vertical axis in this space shows the degree to which the objects of religious interest are granted participation in a transcendent reality (Exclusion vs. Inclusion of Transcendence). The horizontal axis indicates whether individuals interpret religious content literally or symbolically (Literal vs Symbolic). In this way, the two dimensions define four quadrants, each covering a specific attitude towards religion (see Figure 1):

- Literal Affirmation – a position in which the existence of the religious realm is affirmed and religious language is understood literally. It is most clearly embodied by religious fundamentalists. Individuals can sustain this position only if they accept the validity of the conservative view.
- Literal Disaffirmation – a position in which the existence of a religious realm is rejected and religious language is understood only literally. If anything is considered absolute, it is the scientific method and rational principles of knowledge.

- Reductive Interpretation – a position in which an individual rejects the religious realm and claims a privileged perspective on the hidden meaning of religious myths and rituals.
- Restorative Interpretation – a position in which the individual once again affirms the religious realm and its various expressions, but now with a deeper, symbolic understanding.

In his interpretation of the final two types of approaches to content beliefs, Wulff (1999) refers to the ideas of a French philosopher, Paul Ricoeur (1970). Having social and cultural changes as a background, Ricoeur posed a question: how can people call themselves religious in times of criticism and atheism? Summarizing attempts to address such an issue, he came to a conclusion that for the restoration of the meaning of content beliefs, a new interpretation is needed – the so-called restorative interpretation. In the process of restorative interpretation religious symbols are cleared away from consequences of idolatry and illusion and their meaning is reconstructed in such a way so that they can become objects of understanding and faith again. Ricoeur called the process of restorative interpretation “Second Naiveté” (cf. Bartzczuk, Zarzycka, & Wiechetek, 2013).

Figure 1. Integration of the four Post-Critical Belief subscales in Wulff’s (1991; 1999) theoretical model according to Hutsebaut (1996) (see Fontaine, Duriez, Luyten, & Hutsebaut, 2003)



Horizontal and Vertical Individualism-Collectivism

Individualism and collectivism may be defined at the cultural and individual level (see Brewer & Chen, 2007; Caldwell-Harris & Ayçiçeği, 2006; Triandis, 1995; Triandis, Bontempo, Villareal, Asai & Lucca, 1988). Cultural definitions of I-C take into account socio-cultural, geographical and historical background, namely norms, social expectations and values, shared by people using the same language and living in the same time and place

(see Hofstede, 1980; Hui & Triandis, 1986; Triandis, 1995). In individualistic cultures, an emphasis is placed on individuals’ goals over group goals. Social behavior is guided by personal goals, perhaps at the expense of other types of goals. An individual is promoted because each person is viewed as uniquely endowed and possessing distinctive potential. In contrast, collectivistic cultures stress the importance of the group over an individual. A collectivist’s values and beliefs are consistent with and reflect those of the in-group. Most collectivistic cultures value social reciprocity, obligation, dependence, obedience and harmony. An example for a cultural attitude to I-C is the GLOBE (*The Global Leadership and Organisational Behaviour Effectiveness Research Program*) project (House et al., 2004). The number of respondents was 17,300. They were managers from 951 business organizations (from various branches: financial services, catering businesses and telecommunication services), stemming from 62 cultures. The project was aimed at analyzing the socio-cultural phenomena on two levels – the level of real life (practices) and the level of ideals (values). Collectivism was found in two forms here – institutional (taken from Hofstede’s works) and intra-group, family-related (referring to the findings by Triandis) (Boski, 2009; House, Hanges, Javidan, Dorfman, & Gupta, 2004). The lowest institutional collectivism indicators, at the level of practices and values, were noted in eastern-European countries, among others in Poland. Whereas, family-related collectivism indicators were high in these countries. An interest in the cultural approach has been increasing especially in periods of political and socio-cultural transformations (see Adamska, 1997; Daab, 1991, 1993; Jarymowicz, 1999; Kowalik, 2003; Miluska, 2005; Reykowski, 1992, 1993).

At the individual level individualism and collectivism are considered as personality characteristics (Greenwald & Pratkanis, 1988; Jarymowicz, 1999; Markus & Kitayama, 1998; Reykowski, 1990; Triandis, 1995; Wojciszke & Doliński, 2010). Two major dimensions of I-C have been distinguished: the vertical and horizontal components (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1995, 1999). Horizontal individualists value an autonomous self that is seen equal in status to others, whereas vertical individualists, while also affirming an autonomous self, see it as significantly unequal and different from others. Status and competition are important aspects of vertical individualism. Horizontal collectivists see the self as interdependent with the selves of others, which are viewed as similar in status. Equality is expected and practiced within this orientation. Whereas, vertical collectivists likewise see the self as an integral part of the in-group, they expect and embrace inequality within the group. In this orientation, serving and sacrifice are important. Thus, both vertical collectivists and horizontal collectivists tend to perceive themselves as part of a group, but the former accept inequalities within the collective, whereas the latter places a higher emphasis on equality. In contrast, both vertical and horizontal individualists focus on a self-concept that is autonomous, but the former accept inequalities in status, whereas the latter places a higher

emphasis on equality (cf. Chiou, 2001; Cukur et al., 2004; Neuliep, 2012; Triandis, 1995, 1996).

The Present Study: Religiosity, Horizontal and Vertical Individualism-Collectivism

We designed this study to examine the relationship between I-C and religiosity in a Polish Catholic sample. There are several different ways to conceptualize I-C and religiosity. In the present study we examined the relations between these constructs through Triandis' four types of I-C in conjunction with two conceptualizations of religiosity: a traditional view of centrality of religiosity (Huber, 2003) and a notion of religiosity in the context of secularization processes (Wulff, 1999).

There is a relative paucity of empirical evidence directly linking I-C and religiosity. Nonetheless, there are scholars and philosophers who claim that religion and religiosity have implications for I-C tendencies of individuals and for I-C tendencies across societies (Cukur et al., 2004). Sampson (2000) claimed that I-C can be framed within underlying concepts of religions. Christianity, for example, premised as it is on the concept of individual salvation, has been seen as the source of Western individualistic understanding (Weber, 1906/1958; Sampson, 2000) whilst Rabbinic Judaism or Buddhism – the source of Eastern collectivist understanding (Donnelly, 1982; Ho, 1995). Kagitcibasi (1997) stated that monotheistic religions such as Judaism, Christianity, and Islam have emphasized rather collective tendencies, but the European reformation of Christianity has emphasized individualism.

In empirical studies of religiosity and I-C the main focus has been on groups subscribing to the Judeo-Christian tradition (cf. Cukur et al., 2004; Gelfand, Triandis & Chan, 1996; Pettigrew, 1999; Triandis, 1995; Triandis, McCusker & Hui, 1990). Results have shown that religiosity is positively associated with collectivism and negatively with individualism. Whereas, rationalism (scepticism or no religion) is negatively associated with vertical collectivism, but positively with horizontal individualism, and not significantly associated with horizontal collectivism (Singelis et al., 1995).

Cukur et al. (2004) analysed relationships between I-C and religiosity in three countries with various predominant religions: Turkey (Muslim), the Philippines (Catholicism), the United States (Protestantism). The three groups yielded similar results: religiosity correlated positively with collectivism (both vertical and horizontal) and negatively (or close to zero) with both types of individualism. The main limitation of this study was the fact that the authors used a single item to measure religiosity ("My religious beliefs are very important to me"), which participants rated on a Likert-type scale ranging from 1 = disagree to 7 = agree. The use of a single item as an index of religiosity might have led to some confounding effects because not only the strength of what is called "subjective religiosity" but also its meaning can vary across cultural groups. Therefore, Cukur et al. (2004) suggested that future

endeavours should include the use of multidimensional indices to capture other components of religiosity.

The goal of this study is to examine the relationship between Triandis' four types of I-C and various religiosity dimensions in a Polish Catholic sample. This examination was done in two studies. In the first we examined the relations between vertical and horizontal I-C and five components of centrality of religiosity (Intellect, Ideology, Private Practice, Religious Experience, and Public Practice). As discussed in the previous sections, past studies have shown that religiosity is positively associated with collectivism and negatively related to individualism (Cukur et al., 2004; Singelis et al., 1995). We therefore, predicted positive relationships between five components of centrality of religiosity and collectivism (vertical and horizontal). Based on the results of the canonical correlation analysis, we also wanted to extract patterns of correlations. In the second study we tested the relationships between vertical and horizontal I-C and four approaches to religion in today's increasingly secular context. Since past studies have shown that rationalism is associated negatively with collectivism and positively with individualism (Singelis et al., 1995) we hypothesized that both Orthodoxy and Second Naiveté would correlate positively with collectivism (vertical and horizontal) and both Relativism and External Critique positively with individualism (vertical and horizontal).

Study 1. Centrality of religiosity, Horizontal and Vertical Individualism-Collectivism

Participants and Procedure

Sample 1 consisted of 324 university students (244 women, 80 men), following different courses: computer science, history, speech therapy, English, German and Polish. All of them were Polish. The mean age of the participants was 21 ($M = 20.84$; $SD = 1.58$; 22.5% male). Most of them identified themselves as Catholic ($N = 249$, 76.9%); the remaining participants identified themselves as Greek Catholic (3), Orthodox (1), Protestant (2), Jehovah's Witnesses (2), atheists (37), or other (14). Sixteen did not fill out the affiliation but filled out the religiosity questionnaire. Only Catholics were included in the research. Participants reported residing in villages (36.4%), towns (31.2%) and cities (30.2%). Most of them were single (90.4%). Their participation in the research was voluntary. The research was carried out in 2011. Respondents completed tests in six groups organized according to the participants' fields of study.

Materials

Participants responded to paper-and-pencil measures of I-C and religiosity. The measures were as follows.

Centrality of Religiosity Scale (CRS) by S. Huber

It consists of 15 items divided into five subscales (Huber, 2012; see also Zarzycka, 2007, 2011): (1) Intellect – understood as interest in religious issue (e.g., "How often

do you think about religious questions?"); (2) Ideology (religious beliefs) – focused on the aspect of the plausibility of the existence of a transcendent reality (e.g., "How likely, in your view, is the existence of God?"); (3) Private practice – referring to establishing contact with transcendent reality (e.g., "How important is personal prayer to you?"); (4) Religious experience – understood as a sense of divine presence and intervention in the participant's life (e.g., "How often do you experience situations in which you feel that God is telling you something?"); and (5) Public practice – referring to the social rooting of religiosity and participation in religious services (e.g., "How important is it to you to take part in church services?")¹. The total result (Centrality) is the sum of the subscales results.

Acceptable reliability was obtained in the current sample. Cronbach's alpha for each scale were: Intellect .81, Ideology .91, Private practice .91, Religious experience .90, Public practice .86 and for Centrality, the sum of all the items, .95.

Vertical-Horizontal Individualism-Collectivism scale (KIRH)

KIRH contains 39 items that Adamska, Retowski and Konarski (2005) adapted from Triandis (1995) INDCOL scale. The scale was developed to examine individual differences in horizontal individualism (HI), vertical individualism (VI), horizontal collectivism (HC), and vertical collectivism (VC). Horizontal individualism (e.g., "I'd rather depend on myself than others") and vertical individualism (e.g., "Winning is everything") each had 5 items. Likewise, horizontal collectivism (e.g., "I feel good when I cooperate with others"), and vertical collectivism (e.g., "Parents and children must stay together as much as possible"). All items were measured on a Likert-type scale

ranging from 1 (totally disagree) to 7 (totally agree). Factor scores for each participant were derived by calculating the mean of the items constituting each factor. Adamska et al. (2005) reported the following Cronbach's alpha reliabilities: HC .72, VC .73, HI .71 and VI .78. With one exception, ours were highly similar: HC .71, VC .71, HI .74, VI .59.

Results

Firstly, we calculated correlations between I-C and Centrality of religiosity. Secondly, we conducted a series of canonical correlation analyses (CCA) for assessing the relationships between two multivariate sets of variables—four types of I-C and five dimensions of religiosity. Canonical correlation analysis determines a set of canonical dimensions, orthogonal linear combinations of the variables within each set that best explain the variability both within (Adequacy coefficient) and between sets (Redundancy coefficient) (Hotelling, 1936).

Correlation analysis

Table 1 presents correlation coefficients (Pearson's *r*) between dimensions of centrality of religiosity and horizontal and vertical I-C.

The hypothesized positive relations between religiosity and vertical and horizontal collectivism were fully supported: both types of collectivism (horizontal and vertical) correlated positively with the dimensions of the CRS. In contrast, the hypothesized negative relations between religiosity, horizontal and vertical individualism were only partially supported: horizontal individualism correlated negatively with Centrality and Ideology, Public practice and Private practice, whereas vertical individualism did not correlate with CRS at all. Except for the significant relationship between an interest in religious

Table 1. Correlation between I-C (KIRH) and religiosity (CRS)

CRS	Horizontal Individualism	Horizontal Collectivism	Vertical Collectivism	Vertical Individualism
Intellect	-.06	.20*	.15**	-.03
Ideology	-.14*	.20*	.17**	-.04
Private Practice	-.12*	.18***	.24***	-.03
Religious Experience	-.04	.14*	.21***	-.00
Public Practice	-.18***	.13*	.23***	-.06
Centrality	-.13*	.16**	.24***	-.05

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

¹ In this paper we apply the English names of the dimensions C-15, suggested by S. Huber & O. W. Huber (2012): (1) Intellect, (2) Ideology, (3) Private practice, (4) Religious experience and (5) Public practice. In his original German publication *Zentralität und Inhalt. Ein neues multidimensionales Messmodell der Religiosität* from 2003, Huber used the following names of subscales: (1) Cognitive Interest; (2) Religious Ideology; (3) Practice of Prayer, Religious Experience and (5) Church Attendance.

Table 2. Correlation between I-C (KIRH) and religiosity (CRS) in women and men

CRS	Horizontal individualism		Horizontal collectivism		Vertical collectivism		Vertical individualism	
	Women	Men	Women	Men	Women	Men	Women	Men
Interest	-.06	-.09	.07	.25*	.07	.35**	-.03	-.05
Ideology	-.19**	-.12	.07	.20	.13*	.29*	-.02	-.11
Prayer	-.13*	-.17	.15*	.19	.20**	.34**	.01	-.10
Experience	-.05	-.09	.12	.10	.19**	.30*	.02	-.03
Cult	-.21***	-.19	.10	.13	.21***	.30**	-.06	-.02
Centrality	-.15*	-.16	.12	.21	.19**	.37***	-.03	-.08

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

matters and vertical collectivism the correlations in female and male groups showed similar patterns (Table 2).

Canonical analysis

The test of dimensionality for the canonical correlation analysis indicated that only one canonical dimension was statistically significant at the .01 level. The dimension had a canonical correlation of .29 between the sets of variables. Table 2 presents the standardized canonical coefficients for the dimensions across both sets of variables. For the I-C variables, the canonical dimension is most strongly influenced by vertical collectivism (.84) and horizontal individualism (-.61). For the centrality of religiosity, a dimension was comprised of Public practice (.96) and Private practice (.90). The higher the level of vertical collectivism and the lower horizontal individualism was, the higher public and private practice we noted. The results of the canonical variable of I-C account for 5% ($R_{y/x} = .05$) of the variance within religiosity (see Table 3).

Study 2. Post-critical beliefs and Horizontal and Vertical Individualism-Collectivism

Participants and Procedure

Sample 2 consisted of 521 university students (417 women, 104 men), following different courses: psychology, education, dietetics, history, English, German, Polish and Russian. All of them were Polish. The mean age of the participants was 21 ($M = 21.04$; $SD = 1.75$; 20% male). Most of them identified themselves as Catholic ($N = 417$, 80%), 4 as Greek Catholic, 3 as Orthodox, 2 as Protestant, 1 as Pentecostal, 2 as Jehovah's Witnesses and 53 as atheists. 24 students identified themselves as in "other" religious groups, and 15 did not fill out the affiliation but filled out the religiosity questionnaire. All respondents were included in the research. Participants reported residing in villages (36.7%), towns (31.1%) and cities (31.5%). Most of them were single (91%). Their participation in the research was voluntary.

The research was carried out in 2012. Respondents completed tests in eight groups organized according to the field of study. Completed questionnaires were handed in to

Table 3. Results of canonical correlation between I-C (KIRH) and religiosity (CRS)

Variable	CV
I-C	
Horizontal Individualism	-.61
Horizontal Collectivism	.53
Vertical Collectivism	.82
Vertical Individualism	-.20
Ad_x	.35
$R_{x|y}$	.03
R_c	.29
R^2	.08
χ^2	38.68
df	20
$p <$	.01
CRS	
Intellect	.56
Ideology	.74
Private Practice	.90
Religious Experience	.66
Public Practice	.96
Ad_y	.64
$R_{y|x}$	.05

Note. CRS – Centrality of Religiosity Scale; I-C – Individualism-Collectivism Scale; CV – Canonical dimensions; R_c – Canonical correlation coefficient; R^2 – Canonical correlation squared; χ^2 – Bartlett's Chi Square test; df – the number of degrees of freedom; Ad_x – Adequacy coefficient for the I-C set; $R_{x|y}$ – Redundancy coefficient (the variance in the I-C explained by the CRS canonical variate); Ad_y – Adequacy coefficient for the CRS set; $R_{y|x}$ – Redundancy coefficient (the variance in the CRS explained by the I-C canonical variate).

the authors or their collaborators. Participation in the study was voluntary and anonymous.

Materials

Participants responded to paper-and-pencil measures of vertical-horizontal Individualism-Collectivism (KIRH) and Post-Critical Belief (PCBS).

Post-Critical Belief Scale

Hutsebaut and his colleagues (Hutsebaut, 1996; Fontaine, Duriez, Luyten, & Hutsebaut, 2003) constructed the Post-Critical Belief scale to measure the four approaches to religion discerned by Wulff (1991). The PCBS consists of four subscales: Orthodoxy (literal affirmation of transcendence; 8 items); External Critique (literal disaffirmation; 9 items), Relativism (symbolical disaffirmation; 8 items); Second Naiveté (symbolical affirmation; 8 items). (See Figure 1) The Polish adaptation was prepared by Bartczuk, Wiechetek and Zarzycka (2011; Bartczuk et al., 2013). All items were scored on a 7-point Likert scale and the scores for each subscale were the mean of the items' scores. Acceptable reliability was obtained in this sample. Cronbach's alpha for each scale were as follows: Orthodoxy .82, External Critique .87, Relativism .70 and Second Naiveté .87.

Vertical-Horizontal Individualism-Collectivism scale

A Polish version of Vertical-Horizontal Individualism-Collectivism scale (KIRH) by Adamska et al. (2005) was used in this research as well.

Results

As in the study 1, we calculated correlations between I-C and PCBS. Next, we conducted a series of canonical correlation analyses (CCA) for assessing the relationships between two multivariate sets of variables – four types of I-C and four approaches toward religion (PCBS).

Correlation analysis

In Table 3, we presented the correlations between the KIRH and the PCBS. Both types of collectivism (horizontal and vertical) correlated positively with Orthodoxy and Second Naiveté and negatively with External Critique. In contrast, both types of individualism correlated positively with External Critique and Relativism. Furthermore, horizontal individualism correlated negatively with Orthodoxy (see Table 4).

The correlations obtained in female and male groups showed similar patterns and the differences between them were not significant (Table 5).

Canonical analysis

The tests of dimensionality for the canonical correlation analysis, as shown in Table 4, indicated that three canonical dimensions are statistically significant at the .05 level. Dimension 1 (CV1) had a canonical correlation of .41 between the sets of variables, while for dimensions 2 (CV2) and 3 (CV3) the canonical correlation was much lower at .26 and .18, respectively. Table 4 presents the standardized canonical coefficients for three dimensions across both sets of variables.

For the I-C variables, the first canonical dimension (CV1) is most strongly influenced by vertical (.94) and

Table 4. Correlation between I-C (KIRH) and post-critical beliefs (PCBS)

PCBS	Horizontal Individualism	Horizontal Collectivism	Vertical Collectivism	Vertical Individualism
Orthodoxy	-.13**	.21***	.39***	.08
External Critique	.13**	-.15***	-.15**	.12**
Relativism	.19**	.01	-.07	.12**
Second Naiveté	-.06	.28***	.31***	-.07

Note. ** $p < .01$, *** $p < .001$

Table 5. Correlation between I-C (KIRH) and post-critical beliefs (PCBS) in women and men

PCBS	Horizontal Individualism		Horizontal Collectivism		Vertical Collectivism		Vertical Individualism	
	Women	Men	Women	Men	Weman	Men	Women	Men
Orthodoxy	-.14**	-.15	.17***	.33***	.38***	.45***	.08	.12
External Critique	.12*	.22*	-.17***	-.06	-.18***	-.01	.09	.20*
Relativism	.17***	.27**	-.04	.18	-.12*	.08	.09	.19
Second Naiveté	-.07	-.10	.25***	.33***	.31***	.33***	-.04	-.14

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

horizontal (.56) collectivism. For the religious cognitive styles (PCBS), the first dimension comprised Orthodoxy (.97) and Second Naiveté (.71). This means that the rise in collectivism is accompanied by the rise in belief, both literal and symbolic. The results of the canonical variable of I-C account for 7% ($R_{y/x}=.07$) of the variance within the acceptance of transcendence.

The second canonical dimension (CV2) is most strongly influenced by vertical individualism (.75) and horizontal collectivism (-.51). For the PCBS, the second dimension comprised of Second Naiveté (-0.60) and External Critique (0.58). Therefore, the higher the level of vertical individualism and lower horizontal collectivism was, the stronger the tendency to shift from symbolic affirmation to literal disaffirmation. The results of the canonical variable of I-C accounts for only 1% ($R_{y/x} = .01$) of the variance within the values.

The third canonical dimension (CV3) is constructed on horizontal (-.87) and vertical individualism (-.60) and horizontal collectivism (-.53). For the PCBS, the third dimension was comprised only of Relativism (-.96). Therefore, the higher the level of both types of individualism and lower horizontal collectivism, the stronger the symbolic rejection of religion. The results of the canonical variable of I-C accounted for 1% ($R_{y/x} = .01$) of the variance within the values (see Table 6).

Discussion

Most of the studies on I-C have been aimed at examining cross-cultural differences between societies on the individualism-collectivism dimension. This tendency is manifested by categorizing countries as either individualist or collectivist (see Hofstede, 2000). Thus Americans, in comparison to the data from the Middle East, Far East and Africa, score higher in the individualism dimension. There were observed the highest results in the collectivism dimension in the countries of the Sub-Saharan Africa, Latin America, South Asia and West Europe (Oyserman et al., 2002).

In the paper we took a closer look at the various aspects of I-C within the Polish traditional Catholic culture. We analyzed interconnections between horizontal and vertical individualism-collectivism and religiosity defined in a traditional and secularized context. In two studies we explored relationships between I-C and centrality of religiosity (study 1) and post-critical beliefs (study 2). Social orientations proved to be a significant predictor of religiosity, i.e., different dimensions of religiosity increase or decrease together with the increase or decrease in the types of individualism and collectivism. Below you will find a brief summary of the studies' results and discussion in the light of the assumed theoretical principles and available empirical data.

The traditional measure of importance of religiosity (Centrality) correlated positively both with a horizontal and vertical collectivism and negatively with horizontal individualism. The results indicated high importance of

Table 6. Results of canonical correlation between I-C (KIRH) and post-critical beliefs (PCBS)

Variable	CV1	CV2	CV3
I-C			
Horizontal Individualism	-.35	.05	-.87
Horizontal Collectivism	.56	-.51	-.53
Vertical Collectivism	.94	-.03	-.18
Vertical Individualism	.12	.75	-.60
Ad_x	.34	.21	.36
$R_{x|y}$	.06	.01	.01
R_c	.41	.26	.18
R^2	.16	.06	.03
χ^2	151.97	55.02	19.01
df	16	9	4
$p <$	.001	.001	.001
PCBS			
Ortodoxy	.97	.20	-.05
External Critique	-.42	.58	-.39
Relativism	-.26	.12	-.96
Second Naiveté	.71	-.60	-.32
Ad_y	.43	.19	.29
$R_{y|x}$	.07	.01	.01

Note. PCBS – Post-Critical Belief Scale; I-C – Individualism–Collectivism Scale; CV1, CV2, CV3 – Canonical dimensions; R_c – Canonical correlation coefficient; R^2 – Canonical correlation squared; χ^2 – Bartlett's Chi Square test; df – the number of degrees of freedom; Ad_x – Adequacy coefficient for the I-C set; $R_{x|y}$ – Redundancy coefficient (the variance in the I-C explained by the PCBS canonical variate); Ad_y – Adequacy coefficient for the PCBS set; $R_{y|x}$ – Redundancy coefficient (the variance in the PCBS explained by the I-C canonical variate).

public practice and vertical collectivism. Public practice, as it includes community rituals which are obligatory for every confessor, is deep-rooted in institutions and communities. Whilst the vertical collectivism defined as seeing the self as an integral part of the in-groups and the acceptance of individual dissimilarities is the essence of collectivism (Singelis et al., 1995, p. 269). An individual with high vertical collectivism not only feels a part of a collective body but also wants to serve the group and devote herself or himself to it by volunteering in various, even unpleasant tasks.

The research revealed three ways in which post-critical beliefs and social orientations interact and operate. Firstly, the increase in both types of collectivism happen together with the rise in Orthodoxy and Second Naiveté

and with the simultaneous decrease in External Critique. Orthodoxy is a stronger correlate of collectivism than Second Naivetè. This result, confirmed by other researchers (e.g. Cukur et al., 2004), shows that collectivism supports the acceptance of transcendence. Secondly, the increase in External Critique and decrease in Second Naivetè is associated with the increase in vertical individualism and the decrease in horizontal collectivism. According to Wulff (1999), External Critique and Second Naivetè are contradictory mindsets in terms of religion. Consequently, a high result in Second Naivetè is associated with a low result in External Critique. We consider that this result is explicit evidence of a relationship between faith and collectivism as well as the connection of an atheistic approach to individualism. Coexistence of External Critique and individualism seems to be based on reasonableness included in both attitudes. Reasonableness is a significant component of individualism (Triandis, 1995) whereas rational fundamentalism is an important part of External Critique. Additionally, the horizontal type of collectivism, associated with the Second Naivetè, strongly emphasizes the meaning of seeing the self as interdependent and the same as the self of others for religiosity. Whilst, vertical individualism, which is associated with External Critique values an autonomous self, seen as different from and unequal to others. Equality expected and practiced within horizontal collectivism corresponds with the acceptance of transcendence defined symbolically (Second Naivetè) (cf. Triandis & Suh, 2002), whilst status and competition, are important aspects of vertical individualism, correspond with the rejection of the transcendence defined literally.

Thirdly, Relativism revealed the most ambiguous pattern of dependencies with social orientations. As long as correlation analysis suggested that there is a connection between Relativism and vertical individualism, the canonical analysis (third canonical dimension – VC3) showed positive associations of Relativism with both types of individualism and horizontal collectivism. Foregoing remarks are rather postulates for further research than explanations of the results obtained in our study. Considering that collectivism favours belief whilst individualism favours disbelief, the observed positive relationship of Relativism with both types of individualism and horizontal collectivism makes us ask a question about a theoretical status of the Relativism construct. Does it mean rejecting or a selective acceptance of claims made by a religious doctrine? At the present state of the research it is difficult to propose an unambiguous explanation.

To summarize, since the positive correlations between collectivism and religiosity occurred regardless of the applied measures, we assumed that every form of belief is connected with the increase of the collectivist tendency. In contrast, both types of individualism seem to favour relativism and rejection of religion. The religious traditions are by definition a group phenomenon, and for many individuals they form a vital part of one's identity (cf. Chlewiński, 1982). Socialization into the collective naturally includes religious conceptions and practices along with norms and duties. Collectivist religiosity seems

to be an indicator of the church-related religiosity version, still strongly present in Polish society. In such religiosity, formal affiliation to Catholicism means strong faith and regular religious practices (Marianiński, 2011). Furthermore, earlier research (e.g., Zarzycka, 2009) suggests that the ideological and public-worship dimensions of religiosity loom large among Poles, whereas the more private dimensions – religious knowledge, experience, private prayer – are secondary. Also in the GLOBE project, the value of institutional collectivism and that of family-related collectivism practices, correlated positively with religiosity (House et al., 2004). Thus it is understandable that faith in the Polish context tends to be more collectivist than individualistic (cf. Bartczuk et al., 2013). Stressing the significance of personal norms and beliefs, which is characteristic for individualism, makes it easier to challenge religion. Accompanied by individualism, the tendency to reject religion seems to reflect the processes of secularization and individualisation of faith. These processes are present in Polish society and continuously progressing. An individualistic person is inclined to decide independently on their orientations and activities, leaving the religious field and choosing from a wide catalogue those elements which are in concert with their subjective needs and experience. Thus, the Polish society is becoming pluralistic while maintaining the traditional Christian faith (Marianiński, 2011).

We have to acknowledge certain limitations of our study. Firstly, our study does not allow for causal interpretations because of its cross-sectional nature. Secondly, research samples in both studies consist of 20-year-old students, mostly language students from the countryside, who are not representative for Poland, not even for the general Polish students' population. Results can serve only as a very initial pilot study and need to be verified by additional research on a more carefully selected representative sample. Thirdly, it would be interesting to analyze the relationships between I-C and religiosity in a male and female sample. These results did not show any significant differences in the patterns of correlations between males and females. However, because of the small number of male participants this part of the study needs to be confirmed in further research.

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