



# Journal of Intercultural Management and Ethics

## JIME

ISSN 2601 - 5749, ISSN-L 2601 - 5749

published by

Center for Socio-Economic Studies and Multiculturalism  
Iasi, Romania  
[www.csesm.warter.ro](http://www.csesm.warter.ro)

**TABLE OF CONTENT**

Editorial .....	3
Huib Wursten	
Innovation, Agility and Culture .....	5
Huib Wursten, Thomas Imfeld, Martin Karaffa	
What Else Is New? Managing Innovation in Different Cultures .....	17
Fernando Lanzer	
So We Innovated ... Now What? .....	27
Sjaak Pappe	
How Cutting-Edge 21st. Century Tech Giants Are “Crushing It” Simultaneously Pulverizing and Diminishing Start-Up and Small Business Innovation .....	45
Eric Alexander de Groot	
Towards A Learning Culture for Sustainable Knowledge Productivity: The 21st Century Growth Engine for Value Creation .....	57
Joseph Kessels	
Culture and Science in Romania. Evidence from World Values Survey .....	67
Liviu Warter, Iulian Warter	
Towards A Culture of Innovation. How Could The Innovative Spirit Be Cultivated in The Romanian University Environment?.....	85
Anton Carpinschi	

## CULTURE AND SCIENCE IN ROMANIA. EVIDENCE FROM WORLD VALUES SURVEY

Liviu Warter, Ph.D.

Center for Socio-Economic Studies and Multiculturalism, Iasi, Romania

E-mail: liviu@warter.ro

Iulian Warter, Ph.D.

Center for Socio-Economic Studies and Multiculturalism, Iasi, Romania

E-mail: iulian@warter.ro

### Abstract

People are all influenced by the cultures in which they grew up and the societies in which they live. Cultures shape our expectations, values, beliefs, and goals. Scholars and practitioners too, are modeled by their culture and society, which in turn, influence their activity.

Scholars avoid some research areas due to ethical principles or choose others based on their values or political adherence.

Ideological principles span a wide range of concerns, including socioeconomic structures, race relations, gender issues, social philosophies and customs, religions, morality, equality, freedom, and justice.

This article is based on the outcomes of World Values Survey, (waves 5, 6 and 7). The focus of this research is Romania. It approaches the perceptions on science and technology from a cultural point of view, with a special emphasis on religion. The study detected significant differences between the perception of Romanians during the last decades. It also highlighted the public perception on universities.

The results of the study have implications for science educators regarding science-related social controversies, particularly issues related to religion.

Our contribution to the culture and innovation literature consists in improving the current understanding of the nexus between culture, science and technology in Romania.

**Keywords:** culture, science, technology, innovation, religion

### 1. Introduction

Innovation—the successful introduction of a new product, process, or business model—is a powerful driver in the competitive process (Rothärmel, 2017). In accordance with Merrill (2015), the innovation process is about the conversion of new knowledge into new products and services, so an innovative culture has to be a learning culture. We are acquiring new knowledge all the time, and we store this knowledge in our minds. An innovative organization must be agile, so we must have the courage to allow knowledge to be stored in the minds of our people and must not be obsessive about documenting knowledge. The advances in information technology make this documenting very tempting. However, documentation seriously reduces the agility of an organization, and we can only document a fraction of the knowledge in people's minds. Documented knowledge is referred to as explicit knowledge and comprises less than 20 percent of our available knowledge. The knowledge in our minds is tacit knowledge. There is a whole raft of untapped knowledge stored in our tacit and subconscious minds.

In recent years, more and more market observers have come to emphasize the role of innovation in the success of enterprises. This is also reflected in the increased attention the subject has received in the literature. However, despite the widespread agreement on the

centrality of innovation, most enterprises still are struggling with the topic of innovation and regularly experience great difficulties in their innovation efforts. On the contrary, facing the issue at all can feel a lot like facing a dilemma (Huber, Kaufmann, & Steinmann, 2017).

In an interesting approach, Horibe (2001) posits that history gives us many examples of the unpredictable consequences of innovation. The invention of the printing press led to mass literacy. For the first time in human history, it was possible to access knowledge directly, without the involvement and interpretations of a third party. People could decide for themselves what they thought about the world. This ability to question the established order led to the Protestant Reformation, which was based on an individual's right to make his own way to God. And if you could decide your relationship to God, how much more logical to also determine your relationship with the state. And that led to democratic movements. So, the printing press, invented originally simply to avoid the onerous task of copying out by hand, led to democracy that still shapes our world.

There are two categories of innovation that should be distinguished: (1) the business or operating strategy (the actual innovative ideas) and (2) the organizational design (the environment or culture for innovation, including the transformational skills of employees). The focus in many organizations is most often skewed toward finding innovative ideas while the environment or organizational design for systematically finding, developing, and implementing these ideas is overlooked. What is needed is a holistic view of both the business strategy and the development of the organizational environment for innovation. (Dundon, 2002)

In this context, Seitz (2020) reveals, also, that a central argument of the innovation society-thesis is that innovation becomes reflexive. While we can find innovations throughout human history, to make innovation the explicit goal of one's actions is a rather recent phenomenon. Design thinking's sole purpose is the generation of innovation, the production of new solutions to problems. Innovation becomes an end in itself, and one can see how design thinking must contend with several conflicts that arise therein.

National culture defines the social forces within a community involving its conventions for behavior. Religion defines how the community members interpret their role in the universe, this teaching being based on the local culture, so different religions rise out of different cultures (Inglehart & Baker, 2000; Wursten, n.d.a.). Other authors state that culture is very important in order to create synergies among people. Stereotypical information about how people in another culture behave might be wrong in a particular setting and with a particular individual from that culture (Warter & Warter, 2015a; Warter & Warter, 2015b).

Geert Hofstede, a scholar who did the most fundamental research on cultural differences, identified six dimensions of national culture: Power Distance- the way people deal with hierarchy; Individualism/Collectivism- the way people deal with the relationship between the individual and the group; Masculinity/Femininity- the way people deal with motivation, i.e. a preference for competition or a preference for consensus; Uncertainty Avoidance- the way people deal with unfamiliar risks; Long Term Orientation- short term versus long term orientation; Indulgence versus Restraint- the way people deal with basic and natural desires (Wursten, n.d.b.).

Recognizing the role of religion in culture, Charles M. Hampden-Turner and Fons Trompenaars reveal that the tension between Universalism and Particularism spills over into religion, politics, and society. Protestant cultures score higher on the Universalism scale than most Catholic cultures. Universalist cultures seek moral absolutes, typified by the Ten Commandments; for particularist cultures, "it depends". Indulgence may sometimes be extended, and forgiveness follows confession and repentance. In Japanese culture, multiple points of view coexist. The ideal is to find a harmony among the varied particulars of nature

(Hampden-Turner & Trompenaars, 2004). In the same line of thinking, Shalom Schwartz defines ten value constructs related to religion and culture (Schwartz et al., 2001).

For those of you whose high school science is but a faded memory, in 1543, Nicholas Copernicus published a theory that the sun and not the earth was the center of the universe. Galileo's observations led him to believe that Copernicus was right, and he began a lifelong and vocal support of the theory, so much so that he was threatened with excommunication. Today, with science and the scientific method so entrenched in our thinking, it's hard to understand how completely unacceptable Galileo's views were to the Church. First of all, every word in the Bible was considered literally true because it was seen as divinely inspired. Thus, the sun really did stand still at Joshua's prayer and the earth was "ever immovable." Galileo's beliefs were heresy (Horibe, 2001).

## 2. Theoretical background

The innovation process begins with an idea. The idea is often presented in terms of abstract concepts or as findings derived from basic research. Basic research is conducted to discover new knowledge and is often published in academic journals. This may be done to enhance the fundamental understanding of nature, without any commercial application or benefit in mind. In the long run, however, basic research is often transformed into applied research with commercial applications. For example, wireless communication technology today is built upon the fundamental science breakthroughs Albert Einstein accomplished over 100 years ago in his research on the nature of light (Rothärmel, 2017).

In an interesting analysis regarding technical culture, Chouteau, Forest, and Nguyen (2018) reveal that this technical culture would make it possible to prevent technology from being isolated from the social representations that make it emerge, adopt it and make it evolve. Essentially, if technical culture is struggling to develop, make sense, and emancipate itself from scientific culture, in our opinion, this comes from the fact that there is still an antagonism between technology as a product (a concrete object or even the results of calculations) and technology as the result of a design process that incorporates and intertwines the state of knowledge with social and political aims or with economic or legal constraints. In other words, choosing a technical culture to innovate means meeting two challenges. The first challenge is to accept the idea that technology is made up of human and social factors, of history, imagination and representations; it is made up of choices that themselves provide sense/meaning to innovation. The second challenge is to consider that if this technical culture allows us to innovate with consciousness, giving us the means to respond to our vast contemporary challenges.

Moreover, evidence suggests that organizations allowing or enabling employees to break the rules may be more creative. Highly innovative individuals "break from accepted practices" and adapt to develop new solutions for conventional problems. Some highly creative firms consciously hire employees who are "slow learners" of the organizational code or set of rules; these employees resist learning and following rules and standard operational procedures within the firm. These "slow learners" offer new perspectives, initiate different solutions to problems and raise questions about why the organization operates as it does. Arguably, these behaviors can enhance creativity, but deviant actions may carry risk (Baucus, Norton, Baucus, & Human, 2008).

In their book regarding organizational innovation, Valkama, Bailey and Anttiroiko (2013) observe that innovation can be understood as the art of doing things in a better way than before and so organizational innovation can be interpreted as an improved way of undertaking given tasks. Organizational innovation is often defined in organizational studies as the adoption of an idea that is new to the organization. However, the innovation literature contains several definitions of the concept of organizational innovation, which also refers to

the creation of an operational model new to the organization. Organizational innovation can therefore also be understood in institutional terms as process, service, administrative or strategic innovation. Administrative innovations are activated in the social system of an organization and are modifications or new types of relationships between people. They include rules, procedures, roles and structures related to exchange and communication among members of organizations or between an organization and its environment. Such innovations are not as readily observable and testable as technical ideas.

Intriguingly, the findings reveal that technology-based organization cultures are not completely organic or mechanistic in nature. Therefore, any attempt to define these cultures in past traditional terms is misleading to say the least. In order to compete successfully, technology-driven companies must pay attention to the prevailing culture. When culture is neglected or ignored, the company is sure to experience some type of negative impact such as reduced productivity. The findings indicate the following:

- Trusting culture is important to organization growth.
- The culture of an organization directly affects the level of trust found in the organization.
- Productivity is affected by trust.
- Technology-driven organization cultures are not purely organic or mechanistic.

In purely mechanistic cultures one would expect that an organization would exhibit low trust; conversely in purely organic cultures the level of trust would be expected to be considerably higher. It seems appropriate to ascertain that technology-driven organizational cultures are not completely organic or mechanistic. Cultures that permit flexibility, creativity, critical thinking, and the appropriate level of risk taking are viewed as optimal for technology-driven organizations. Each organization exhibits various characteristics or elements of organic and mechanistic culture. Technical organizations function primarily in cultures that contain the right balance of attributes permitting critical thinking and flexibility and the right balance of elements supporting the appropriate levels of rules and procedures that serve as a stable guiding force for the organization (Alston, 2013)

In an early study, Dundon (2002) contends that many organizations are beginning to realize that what got them to where they are today might not get them through the next five years. According to Peter Drucker, “every organization—not just business—needs one core competence—innovation.” It only seems appropriate that, in times of economic challenge, global competition, and an overabundance of similar products and services, leaders would turn to innovation as the new corporate mantra. Unfortunately, the concept of innovation has been so widely used and misused that many people are now confused as to what it really is.

As a society shifts from an agrarian to an industrial economy traditional religious beliefs tend to decline. However, the converse is also true. Communist-style industrialization was especially favorable to secularization, but the collapse of Communism has given rise to pervasive insecurity and a return to religious beliefs. Furthermore, the post-industrial phase is not necessarily characterized by a decline in the prevalence of traditional religious. People have always sought answers to such questions as: Where do we come from? Where are we going? Why are we here? The need for answers may be especially acute in the face of disaster (Inglehart & Baker, 2000). Further, Samuel P. Huntington, cited by Huib Wursten, stated that people's religious identities would be the primary source of conflict in the post-Cold War world because religion is the dominant cultural issue in his opinion (Wursten, n.d.b.).

According to Minkov and Hofstede (2014), individuals who share a national habitat are involved in complex interactions that result in the emergence of a particular national culture. A global religion will not be able to produce a specific global culture of its own as it

cannot generate sufficiently complex and frequent interactions among its members across the globe.

Once established, the cross-cultural differences linked with religion have become part of a national culture that is transmitted by the educational institutions and mass media of given societies to the people of that nation. A comparison of the relative contribution of national versus global religions on the cultural values of nations and in-country religious groups reveals that the national influence is much stronger than the influence of global religions. Evidence from the World Values Surveys demonstrates both massive cultural change and the persistence of distinctive traditional values (Minkov & Hofstede, 2014; Inglehart & Baker, 2000).

In this context, Minkov and Hofstede (2014) reveal, also, that different religious groups can create different cultures and can account for different values, as showed by many prominent publications in the international management literature. Minkov and Hofstede consider that even a large and important cultural difference between two religious groups in a particular nation cannot automatically be viewed as a religious difference. Nations with similar religions tend to cluster together on measures of national culture. They also point out that religions have little effect on individual values and this seems to be true at the societal level as well. Religion can affect culture, but also culture can be moderating the penetration and local adaptation of a religious current.

Regional, ethnic, and religious cultures account for differences within countries; ethnic and religious groups often transcend political country borders. Such groups form minorities at the crossroads between the dominant culture of the nation and their own traditional group culture. Some assimilate into the mainstream, although this process may take a generation or more; others continue to stick to their own ways ( Hofstede, Hofstede, & Minkov, 2010)

Minkov and Hofstede, in their classic paper (Minkov & Hofstede, 2014), show that in terms of values, nations have on one hand a homogenizing effect, i.e. the values of nominally different religious groups that live within a single nation tend to be fairly similar and on the other hand a discriminant one, i.e the nominally different religious groups that live within a single nation tend to be distinguishable from the religious groups of other nations.

Extant research suggests that greed, insatiable consumption, and self-serving behavior have become not only acceptable in society, but may be seen as a desirable trait in some segments of our society. “Greed”, or the quest to obtain superior returns, is the motivating force for publicly held firms to innovate and engage in risky entrepreneurial initiatives. Publicly held corporations have a fiduciary duty to act on the behalf of their owners (Miles, Munilla, & Covin, 2004).

In accordance with Baucus et al. (2008), discussions of rule-breaking and the other three categories of recommendations for increasing creativity do not explore the ethical dilemmas and issues with which managers and their employees must wrestle to engage in creative and ethical endeavors. Managers striving to implement recommendations for improving creativity or employees attempting to behave creatively may not know what ethical questions to consider. Their efforts to foster and engage in creativity may result in unethical behaviour or give rise to an organizational culture that encourages and rewards misconduct.

The same authors posit that creativity researchers address the reality of organizational constraints by recommending that innovation seekers challenge authority and avoid traditions. Employees can then step forward with viable solutions (often in the form of innovations) rather than simply complaining about or criticizing current practices (Baucus et al., 2008).

As Merrill (2015) describes, a culture of creativity and innovation is one that releases the tacit and subconscious knowledge embedded inside its people. New behaviors are needed to release this knowledge: exploration in which we “step out of the box” and gain new learning, collaboration in which we interact with people who are “different” from ourselves, willingness to experiment and to fail in order to find new solutions. The vital spark comes from the diversity of our people.

However, with the principal goal of organizations being “survival” in the long-term, it is assumed that innovation is necessary in order to realize a going concern. Firms that do not innovate and adapt to rapidly changing business environments are less likely to be sustainable. Thus, it is in a business’ best interests to adopt an innovation process for long-term success (Schumacher, & Wasieleski, 2013).

Neumeier (2009) found that in an age of accelerating change, how you learn is vastly more important than what you learn. The ability to acquire new knowledge quickly is the fundamental skill that underpins a culture of innovation. “Every enterprise is a learning and teaching institution,” said Drucker. “Training and development must be built into it at all levels—training and development that never stop.” If you want a culture of non-stop innovation, you need a system of non-stop training.

Other studies reveal that a growing call for responsible innovation supported or even initiated by institutionally powerful players (e.g. government, funding agencies) changes the perception that the enterprise of science-driven innovation can simply be reduced to a limited number of identifiable partners (in innovation networks) who are capable of unambiguously articulating their interests (Pandza, & Ellwood, 2013).

A study by Brown and Ulijn (2004) conclude that innovation, entrepreneurship and culture are studied in many disciplines and hence lead to many conceptualizations, including economic, sociological and psychological approaches. In addition, culture draws less from economics, but more from anthropology and linguistics (discourse studies), which are seldom applied to innovation or entrepreneurship. Organization and management studies seem to be the ideal interdisciplinary meeting place for all this. Furthermore, one may say that culture is a relative old research topic and entrepreneurship a relative new field of scientific investigation with all its problems of delineation, scope, paradigmata for theorizing, model design and testing, etc.

### **3. Methodology**

This article is based on the outcomes of World Values Survey, (waves 5, 6 and 7) (Inglehart et al., 2020). The focus of this research is Romania. It approaches the perceptions on science and technology from a cultural point of view, with a special emphasis on religion.

The World Values Survey (WVS) is a global research project that explores people’s values and beliefs, how they change over time, and what social and political impact they have. Since 1981 a worldwide network of social scientists have conducted representative national surveys as part of WVS in almost 100 countries.

Samples are drawn from the entire population of 18 years and older. The minimum sample is 1000. In most countries, no upper age limit is imposed and some form of stratified random sampling is used to obtain representative national samples. In the first stages, a random selection of sampling points is made based on the given society statistical regions, districts, census units, election sections, electoral registers or polling place and central population registers. In most countries the population size and/or degree of urbanization of these Primary Sampling Units are taken into account. In some countries, individuals are drawn from national registers. Following the sampling, each country is left with a representative national sample of its public. These persons are then interviewed during a limited time frame decided by the Executive Committee of the World Values Survey using

the uniformly structured questionnaires. The survey is carried out by professional organizations using face-to-face interviews or phone interviews for remote areas.

The Sample Design of World Values Survey Wave 7 in Romania:

- The target population size was 16,266,394 (National Institute of Statistics - INSSE - 2011 Census).
- The target sample size was 1,200 individuals.
- A stratified two-stage probability sampling was employed, with stratification in the first stage of the primary selection units (voting precincts) proportional to their number of secondary selection units (adults registered on the voting lists).
- Stratification factors:
  - The socio-cultural area (18 areas)
  - The type and size of the locality (poor communes, medium developed communes, developed communes, cities with less than 30 thousand inhabitants, cities of 30-100 thousand inhabitants, cities of 100-200 thousand inhabitants, cities with more than 200 thousand inhabitants)

The Sample Design of World Values Survey Wave 6 in Romania:

- Targeted sample size: 1500.
- Sampling universe: Persons 18-85 years who are resident in private households in Romania N = 17,494,061 (INSSE, Tempo-Online, [www.insse.ro](http://www.insse.ro))
- Areas of the population excluded:
  - Temporary emigrants (around 5-10%);
  - Homeless, foreigners and institutional population (maximum 0.5%).
- Stratification factors:
  - The socio-cultural area (18 areas)
  - The type and size of the locality (poor communes, medium developed communes, developed communes, cities with less than 30 thousands inhabitants, cities of 30-100 thousands inhabitants, cities of 100-200 thousands inhabitants, cities with more than 200 thousands inhabitants)

The research is longitudinal, based on time series that include the last two waves and, where available, from previous waves too.

The research analyses the agreement of the respondents with the following statements:

- Science and technology are making our lives healthier, easier, and more comfortable.
- Because of science and technology, there will be more opportunities for the next generation
- It is not important for me to know about science in my daily life.
- The world is better off, or worse off, because of science and technology.
- Future changes: More emphasis on the development of technology.
- We depend too much on science and not enough on faith
- One of the bad effects of science is that it breaks down people's ideas of right and wrong.
- Whenever science and religion conflict, religion is always right
- Confidence in Universities

The results of data processing are presented in two ways: tables (tables no. 1-9) and diagrams (figures no. 1-9).

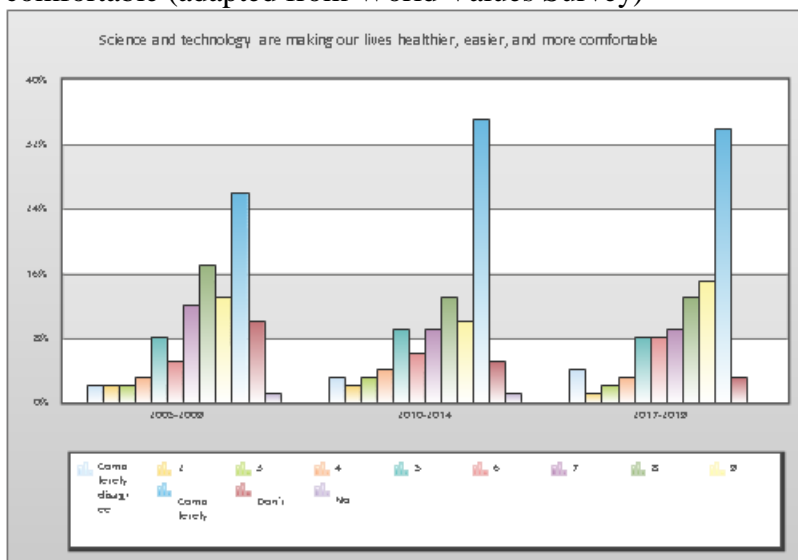
#### 4. Results

a. Science and technology are making our lives healthier, easier, and more comfortable.

Table 1. Science and technology are making our lives healthier, easier, and more comfortable

	Romania		
	2005-2009	2010-2014	2017-2019
Completely disagree	2%	3%	4%
2	2%	2%	1%
3	2%	3%	2%
4	3%	4%	3%
5	8%	9%	8%
6	5%	6%	8%
7	12%	9%	9%
8	17%	13%	13%
9	13%	10%	15%
Completely agree	26%	35%	34%
Don't know	10%	5%	3%
No answer	1%	1%	0%

Figure 1. Science and technology are making our lives healthier, easier, and more comfortable (adapted from World Values Survey)



It can be noticed that most of the respondents consider that science and technology are making our lives healthier, easier, and more comfortable and very few of them disagree with this. This trend was positive in the last two decades but we can observe a small decline in the recent survey.

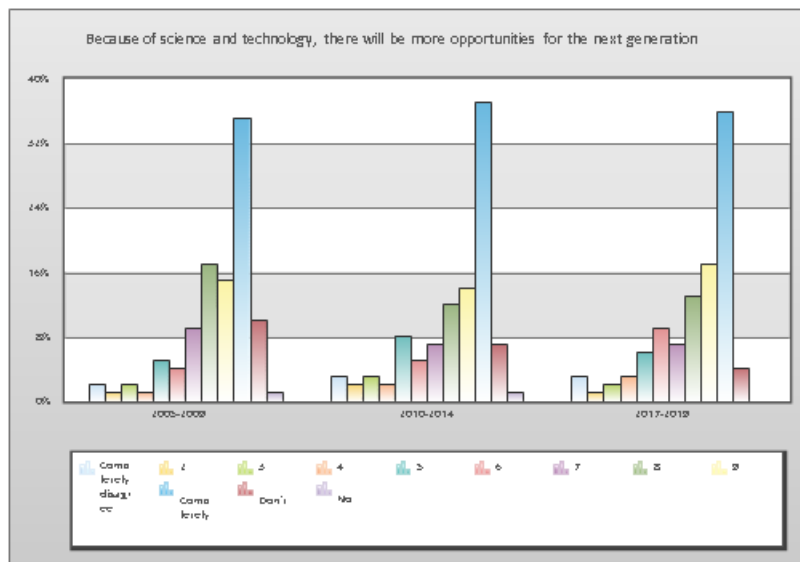
b. Because of science and technology, there will be more opportunities for the next generation

Table 2. Because of science and technology, there will be more opportunities for the next generation

	Romania
--	---------

	2005-2009	2010-2014	2017-2019
Completely disagree	2%	3%	3%
2	1%	2%	1%
3	2%	3%	2%
4	1%	2%	3%
5	5%	8%	6%
6	4%	5%	9%
7	9%	7%	7%
8	17%	12%	13%
9	15%	14%	17%
Completely agree	35%	37%	36%
Don't know	10%	7%	4%
No answer	1%	1%	0%

Figure 2. Because of science and technology, there will be more opportunities for the next generation (adapted from World Values Survey)



It can be noticed that most of the respondents consider that because of science and technology, there will be more opportunities for the next generation and very few of them disagree with this. This trend was positive in the last two decades but we can observe a small decline in the recent survey.

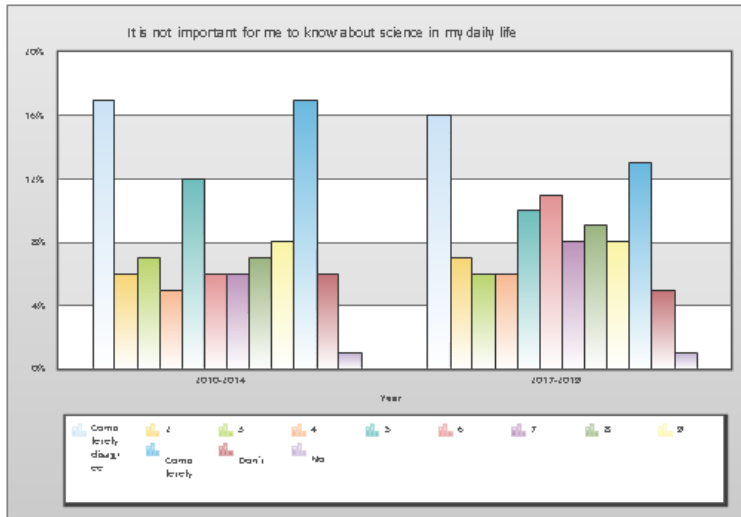
c. It is not important for me to know about science in my daily life.

Table 3.-It is not important for me to know about science in my daily life

	Romania	
	2010-2014	2017-2019
Completely disagree	17%	16%
2	6%	7%
3	7%	6%
4	5%	6%
5	12%	10%
6	6%	11%
7	6%	8%

8	7%	9%
9	8%	8%
Completely agree	17%	13%
Don't know	6%	5%
No answer	1%	1%

Figure 3.-It is not important for me to know about science in my daily life (adapted from World Values Survey)



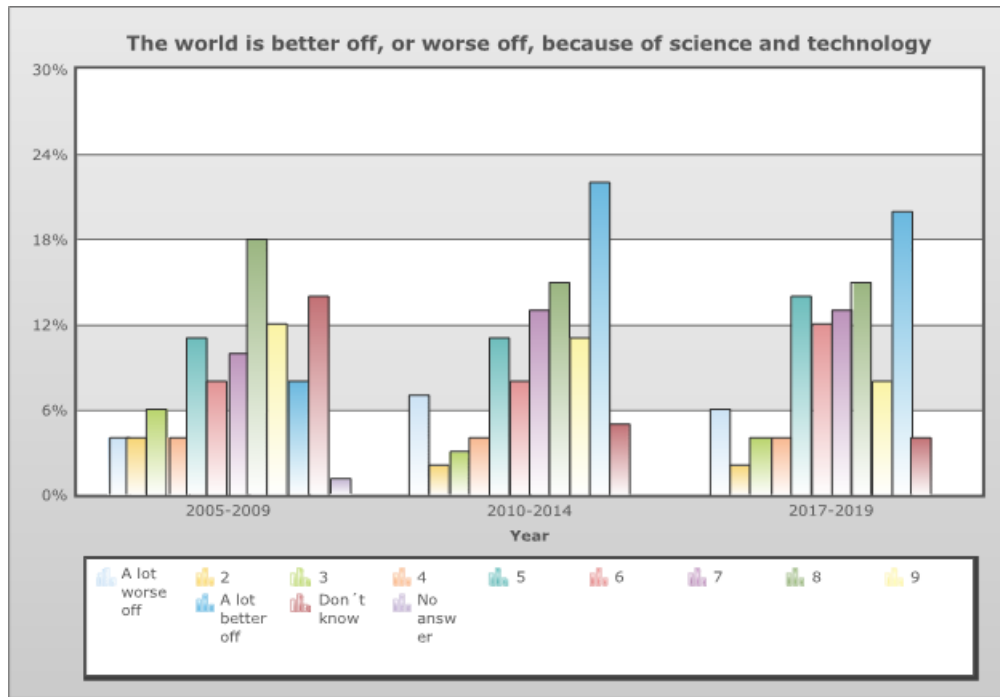
It can be noticed the perception on importance of science in daily life it is quite balanced. We can observe a small decline in the recent survey.

d. The world is better off, or worse off, because of science and technology.

Table 4. The world is better off, or worse off, because of science and technology

	Romania		
	2005-2009	2010-2014	2017-2019
A lot worse off	4%	7%	6%
2	4%	2%	2%
3	6%	3%	4%
4	4%	4%	4%
5	11%	11%	14%
6	8%	8%	12%
7	10%	13%	13%
8	18%	15%	15%
9	12%	11%	8%
A lot better off	8%	22%	20%
Don't know	14%	5%	4%
No answer	1%	0%	0%

Figure 4. The world is better off, or worse off, because of science and technology (adapted from World Values Survey)



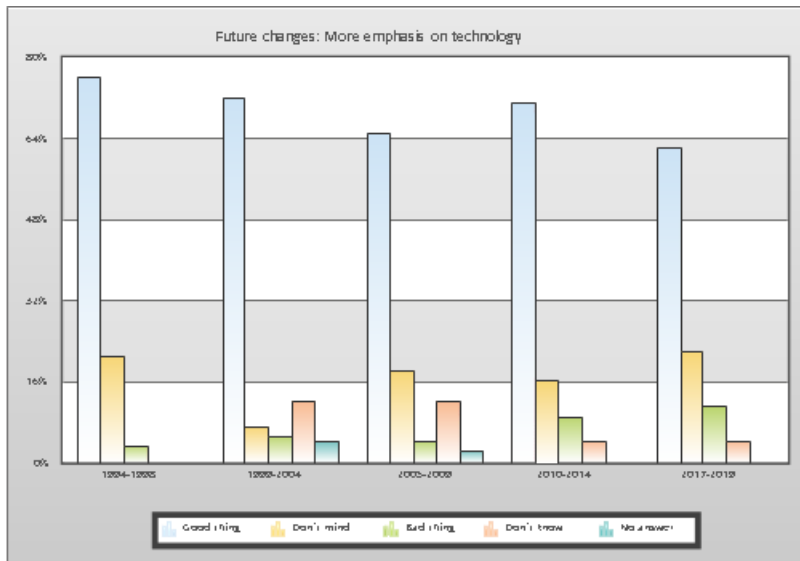
It can be noticed that most of the respondents consider that the world is better off, because of science and technology and very few of them disagree with this. This trend was positive in the last two decades but we can observe a small decline in the recent survey.

e. Future changes: More emphasis on the development of technology.

Table 5. Future changes: More emphasis on technology

	Romania				
	1994-1998	1999-2004	2005-2009	2010-2014	2017-2019
Good thing	76%	72%	65%	71%	62%
Don't mind	21%	7%	18%	16%	22%
Bad thing	3%	5%	4%	9%	11%
Don't know	-	12%	12%	4%	4%
No answer	-	4%	2%	0%	0%

Figure 5. Future changes: More emphasis on technology (adapted from World Values Survey)



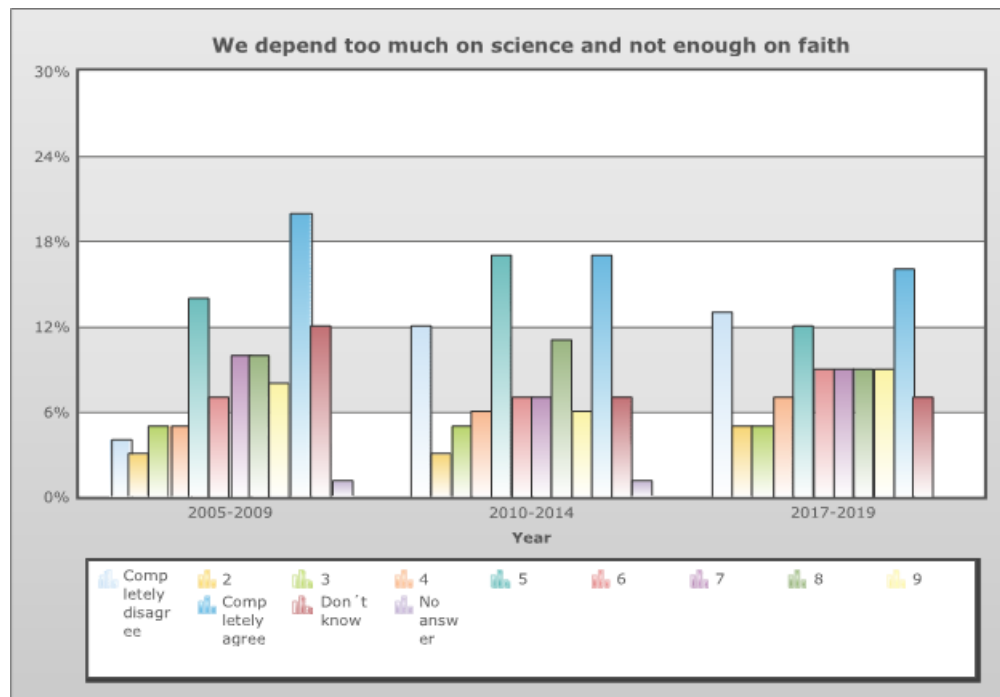
It can be noticed that the vast majority considers that the future changes should emphasis more on technology but the trend is negative in the last three decades.

f. We depend too much on science and not enough on faith

Table 6. We depend too much on science and not enough on faith

	Romania		
	2005-2009	2010-2014	2017-2019
Completely disagree	4%	12%	13%
2	3%	3%	5%
3	5%	5%	5%
4	5%	6%	7%
5	14%	17%	12%
6	7%	7%	9%
7	10%	7%	9%
8	10%	11%	9%
9	8%	6%	9%
Completely agree	20%	17%	16%
Don't know	12%	7%	7%
No answer	1%	1%	0%

Figure 6. We depend too much on science and not enough on faith (adapted from World Values Survey)



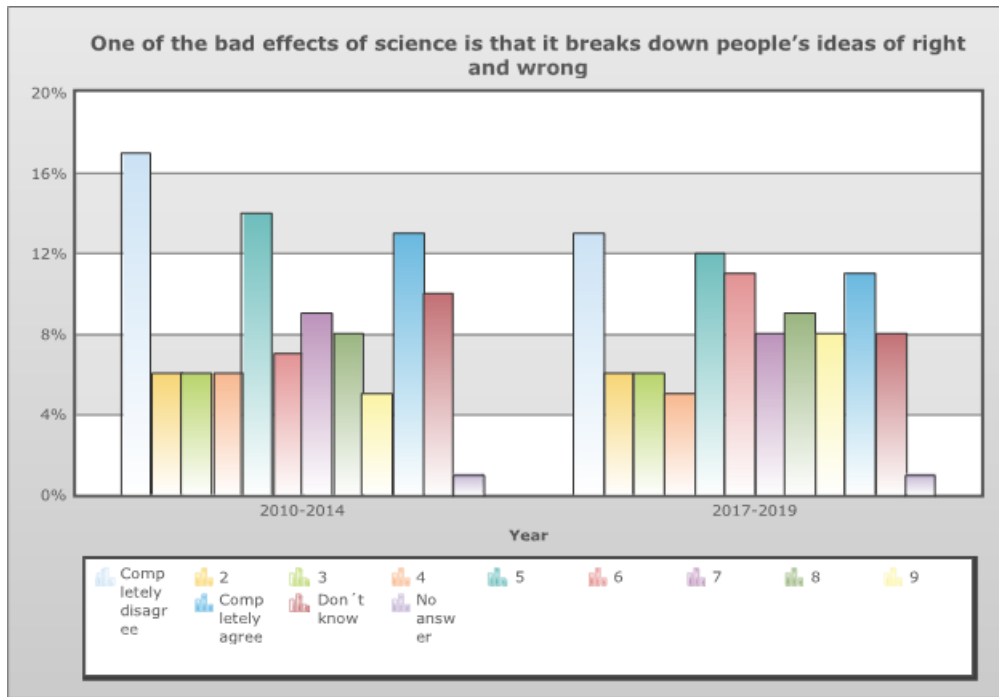
It can be noticed that most of the respondents consider that we depend too much on science and not enough on faith and few of them disagree with this. This trend was negative in the last two decades.

g. One of the bad effects of science is that it breaks down people's ideas of right and wrong.

Table 7. One of the bad effects of science is that it breaks down people's ideas of right and wrong

	Romania	
	2010-2014	2017-2019
Completely disagree	17%	13%
2	6%	6%
3	6%	6%
4	6%	5%
5	14%	12%
6	7%	11%
7	9%	8%
8	8%	9%
9	5%	8%
Completely agree	13%	11%
Don't know	10%	8%
No answer	1%	1%

Figure 7. One of the bad effects of science is that it breaks down people's ideas of right and wrong (adapted from World Values Survey)



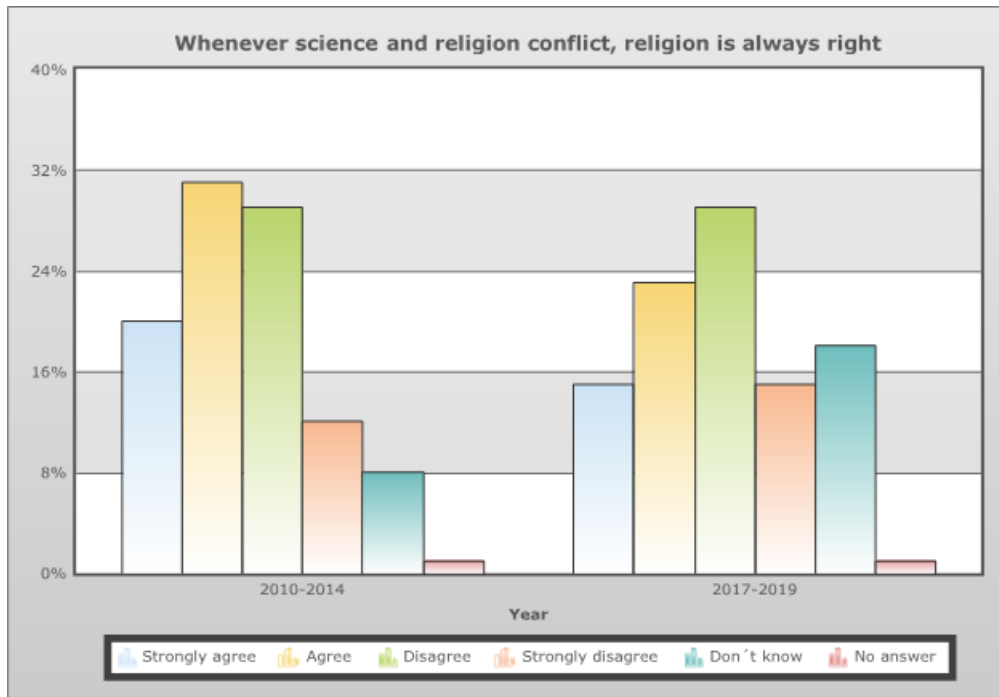
It can be noticed the perception on the bad effects of science that it breaks down people's ideas of right and wrong it is quite balanced. We can observe a decline in the recent survey for both respondents that completely agree and the ones that completely disagree.

h. Whenever science and religion conflict, religion is always right

Table 8. Whenever science and religion conflict, religion is always right

	Romania	
	2010-2014	2017-2019
Strongly agree	20%	15%
Agree	31%	23%
Disagree	29%	29%
Strongly disagree	12%	15%
Don't know	8%	18%
No answer	1%	1%

Figure 8. Whenever science and religion conflict, religion is always right (adapted from World Values Survey)



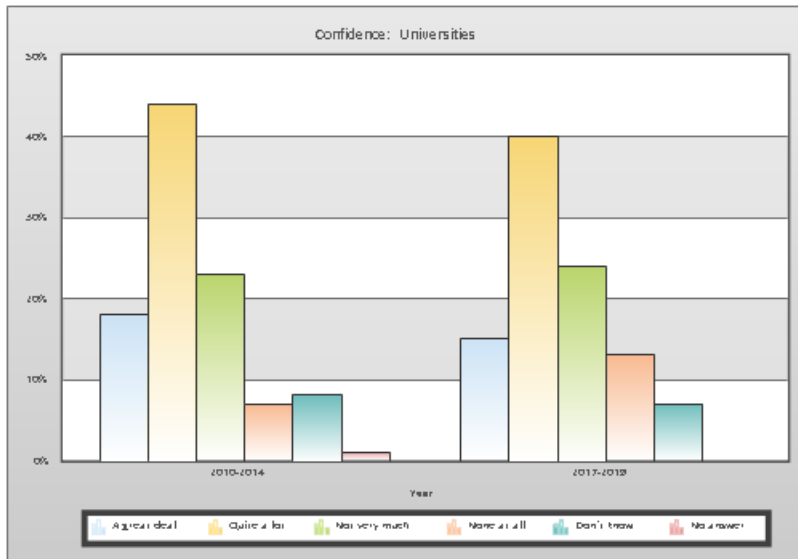
It can be noticed that most of the respondents consider that whenever science and religion conflict, religion is always right and few of them strongly disagree with this. We can observe a significant decline in the last decade.

i. Confidence in Universities

Table 9. Confidence: Universities

	Romania	
	2010-2014	2017-2019
A great deal	18%	15%
Quite a lot	44%	40%
Not very much	23%	24%
None at all	7%	13%
Don't know	8%	7%
No answer	1%	0%

Figure 9. Confidence: Universities (adapted from World Values Survey)



It can be noticed that most of the respondents are confident in universities and few of them are not confident at all. We can observe a significant decline in the last decade.

## 5. Conclusion

A certain culture will emerge among people who share a particular geographic, and socio-economic habitat. National culture operates as a gravitational force to keep a nation together in terms of cultural values.

The technical culture prevents technology from being isolated from the social representations that make it emerge and evolve. Technology is made up of human and social factors, of history, imagination and representations.

While innovations accompanies human history, innovation as an explicit goal is a fairly recent phenomenon. Today it's hard to understand how completely unacceptable Galileo's views were to the Church. This ability to question the established order led to the Protestant Reformation.

Nowadays, in what way we learn is tremendously more important than what we learn. The ability to quickly gain new knowledge is a point of departure of the culture of innovation. The innovative culture has to be a learning one. Collaboration in which we interact with people who are "different" and the willingness to experiment and to fail in order to find new solutions are essential skills.

Highly innovative people "break from accepted practices" and this augments creativity. Innovation seekers should question authority and avoid customs.

This article is based on the outcomes of World Values Survey, (waves 5, 6 and 7). The focus of this research is Romania. It approaches the perceptions on science and technology from a cultural point of view, with a special emphasis on religion.

The results of this research are partially as expected but still there are some surprising outcomes and moreover some contradictory issues.

On the one hand, most of the respondents agree that science and technology are making our lives healthier, easier, and more comfortable, that because of science and technology, there will be more opportunities for the next generation, that the future changes should emphasis more on technology, and that the world is better off, because of science and technology. Despite this, the perception on importance of science in daily life it is quite balanced.

On the other hand, when it comes to science and religion, most of the respondents agree that we depend too much on science and not enough on faith, and that whenever

science and religion conflict, religion is always right. Despite this, the perception on the bad effects of science that it breaks down people's ideas of right and wrong it is quite balanced.

Regarding the tendencies, we can surprisingly remark a decline in the last years of the percentages of respondents that agree with all the statements mentioned before.

A special remark on confidence in universities that can be considered drivers of innovation in societies. Most of the respondents are confident in universities but there is a significant decline in the last decade.

According to the outcomes of this research an interesting trend can be observed: there is a simultaneous decrease of confidence in the last decade in science, technology, religion and university. This ascertainment raises more questions regarding the beliefs and values of Romanians and particularly about the changes in the last decades and the reasons for this. Given that the authors have been conducting research on culture and ethics in Eastern Europe and especially culture and ethics in higher education in recent years, they will seek to explain certain aspects from an ethical perspective in conjunction with culture.

Despite maintaining momentum, we acknowledge that our findings remain explorative and tentative. Further work is required to expand on the present findings across other contexts. We look ahead to an active research agenda going forward.

## 6. References

1. Alston, F. (2013). *Culture and trust in technology-driven organizations*. CRC Press.
2. Baucus, M. S., Norton, W. I., Baucus, D. A., & Human, S. E. (2008). Fostering Creativity and Innovation without Encouraging Unethical Behavior. *Journal of Business Ethics*, 81(1), 97-115. doi:10.1007/s10551-007-9483-4.
3. Brown, T. E., & Ulijn, J. M. (2004). *Innovation, entrepreneurship and culture: The interaction between technology, progress and economic growth*. Cheltenham: E. Elgar.
4. Chouteau, M., Forest, J., & Nguyen, C. (2018). *Science, technology and innovation culture*. London: ISTE.
5. Dundon, E. (2002). *The Seeds of Innovation: Cultivating the Synergy That Fosters New Ideas*. AMACOM.
6. Hampden-Turner, C., & Trompenaars, F. (2004). *Building cross-cultural competence: how to create wealth from conflicting values*. Chichester: J. Wiley.
7. Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). *Cultures and organizations: software of the mind: intercultural cooperation and its importance for survival*. New York: McGraw-Hill.
8. Horibe, F. (2001). *Creating the innovation culture: Leveraging visionaries, dissenters and other useful troublemakers in your organization*. Toronto: J. Wiley & Sons.
9. Huber, D., Kaufmann, H., & Steinmann, M. (2017). *Bridging the Innovation Gap: Blueprint for the Innovative Enterprise*. Cham: Springer International Publishing.
10. Inglehart, R., & Baker, W.E. (2000). Modernization, Cultural Change, and the Persistence of Traditional Values. *American Sociological Review*, 65(1), 19-51
11. Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: All Rounds – Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WWSA Secretariat [Version: <http://www.worldvaluessurvey.org/WVSDocumentationWVL.jsp>].
12. Merrill, P. (2015). *Innovation never stops: Innovation generation: The culture, process, and strategy*. Milwaukee, WI: ASQ Quality Press.
13. Miles, M. P., Munilla, L. S., & Covin, J.G. (2004). Innovation, Ethics, and Entrepreneurship. *Journal of Business Ethics*, 54, 97–101.

14. Minkov, M., & Hofstede, G. (2014). Nations Versus Religions: Which Has a Stronger Effect on Societal Values?. *Management International Review*, 54(6), 801–824.
15. Neumeier, M. (2009). *The designful company: How to build a culture of non stop innovations: A whiteboard overview*. Berkeley: New Riders
16. Pandza, K., & Ellwood, P. (2013). Strategic and ethical foundations for responsible innovation. *Research Policy*, 42(5), 1112-1125. doi:10.1016/j.respol.2013.02.007.
17. Rothärmel, F. T. (2017). *Strategic management*. New York, NY: McGraw-Hill Education.
18. Seitz, T. (2020). *Design Thinking and The New Spirit of Capitalism: Sociological reflections on innovation culture*. Place of publication not identified: Springer Nature.
19. Schumacher, E. G., & Wasieleski, D. M. (2013). Institutionalizing Ethical Innovation in Organizations: An Integrated Causal Model of Moral Innovation Decision Processes. *Journal of Business Ethics*, 113(1), 15-37. doi: 10.1007/s10551-012-1277-7.
20. Schwartz, S.H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519–542.
21. Valkama, P., Bailey, S. J., & Anttiroiko, A. (2013). *Organizational Innovation in Public Services Forms and Governance*. Basingstoke: Palgrave Macmillan.
22. Warter, L. & Warter, I. (2015a). Can Mergers And Acquisitions Improve Banking Industry?. In A. Roman, S.G. Anton & I. Bilan (Eds) *Euro and the European banking system: evolutions and challenges* (pp. 377-386). Iasi: Editura Universitatii “Alexandru Ioan Cuza”.
23. Warter, I. & Warter, L. (2015b). Implications Of M&As For Banking Industry. From Cultural Fit To Cultural Clashes. In A. Roman, S.G. Anton & I. Bilan (Eds) *Euro and the European banking system: evolutions and challenges* (pp. 367-376). Iasi: Editura Universitatii “Alexandru Ioan Cuza”.
24. Wursten, H. (n.d.a.). Culture, religion and ethics. What is the connection?. Retrieved from: [http://www.bing.com/cr?IG=E948AF2E88EE4EF8A6E7E988A6A981C2&CID=1DAC674EFFB167710DEB6C04FEB766CB&rd=1&h=j9pBaoR\\_4W7n8-DWeM8nL9P XVIHUC\\_6gTMb6Smjs08&v=1&r=http%3a%2f%2fwww.academia.edu%2f32293280%2fCulture\\_religion\\_and\\_ethics.\\_What\\_is\\_the\\_connection.docx&p=DevEx,5087](http://www.bing.com/cr?IG=E948AF2E88EE4EF8A6E7E988A6A981C2&CID=1DAC674EFFB167710DEB6C04FEB766CB&rd=1&h=j9pBaoR_4W7n8-DWeM8nL9P XVIHUC_6gTMb6Smjs08&v=1&r=http%3a%2f%2fwww.academia.edu%2f32293280%2fCulture_religion_and_ethics._What_is_the_connection.docx&p=DevEx,5087)
25. Wursten, H. (n.d.b.). Cosmopolitans and the values of the nation state. Retrieved from: [http://www.academia.edu/32293278/Huib\\_Wursten\\_Cosmopolitans\\_and\\_the\\_values\\_of\\_the\\_nation\\_state](http://www.academia.edu/32293278/Huib_Wursten_Cosmopolitans_and_the_values_of_the_nation_state).