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THE PERSONAL FACTORS IN SCIENTIFIC COLLABORATION: VIEWS HELD BY SLOVENIAN RESEARCHERS

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ABSTRACT *Scientific collaboration (SC) has become a widespread feature of modern research work. While many social network studies address various aspects of SC, little attention has so far been given to the specific factors that motivate researchers to engage in SC at the individual level. In our article, we focus on the types and practices of SC that researchers in Slovenia engage in. We consider this topic by adopting a quantitative and qualitative methodological approach. The former was conducted through a web survey among active researchers, and the latter through in-depth interviews with a selected group of top researchers, i.e. intellectual leaders. Results show the extent of individual SC depends on the perceptions of researchers of the benefits of SC. Qualitative interviews additionally provide broader reflections on certain policy mechanisms that could better motivate Slovenian scientists to scientifically collaborate in the international arena.*
KEYWORDS: *scientific collaboration; research cooperation; personal factors; scientific disciplines*

INTRODUCTION

In contemporary science, scientific collaboration (SC) is becoming an ever more complex and necessary phenomenon that can take many forms. Although

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the term SC[2] is hard to define clearly (Hara et al. 2003) and its borders therefore remain "very fuzzy or ill-defined" (Katz et al. 1997, p. 8), there is a general societal consensus about its growing importance. SC is shaped by the social norms of various research practices and the different structures of scientific knowledge that exist across the scientific community. For practical purposes, we refer to Sonnenwald's definition of SC as "human behavior among two or more scientists that facilitates the sharing of meaning and completion of tasks with respect to a mutually shared superordinate goal and which takes place in social contexts" (Sonnenwald 2007, p. 645). We could say that, regardless of the level and type of analysis, the concept of SC is understood as a process based on knowledge-sharing and one that facilitates the achievement of common goals.

SC can be observed from different perspectives and this diversity contributes to the abundance of various terminologies, research approaches and methodologies (Katz et al. 1997, Shrum et al. 2008, Shrum et al. 1998). Further, a range of indicators for measuring SC has also been used. Co-authorship publications are usually regarded as the most prominent indicator (Katz et al. 1997, Glaenzel et al. 2004). However, many other instances of SC are not "consummated" by way of co-authorship publications and thereby remain undetected by bibliometric approaches (informal interactions at a distance, exchanges of students and researchers, hosted visits etc.) (Melin et al. 1996, Laudel 2002).

The wider question of what SC is and how it can be investigated leads us to consider which factors can influence and promote SC. Such an interplay of factors occurs at the micro level (individual scientists), meso level (research groups, departments, institutions) and macro level (institutional sectors, in particular collaborative agreements between university and industry, countries or regions) (Franceschet et al. 2010, Melin 2000). National and transnational R&D policy decisions have a big impact on SC at the macro level (Katz et al. 1997, Sonnenwald 2007, Maglaughlin et al. 2005). The various institutional mechanisms for funding and encouraging various types of SC, such as mobility programs, common international use of large research facilities etc., could be seen as the most important macro external factors affecting SC (Langfeldt et al. 2012, Toral et al. 2011).

Regarding the R&D science policy context in Slovenia, our previous analyses of SC have shown that different types of SC are still not properly supported with appropriate policy mechanisms. We have detected many deficiencies (Mali et al. 2010, Mali et al. 2012, Kronegger et al. 2012a, Mali 2013). A considerable

2 In many cases, the term "collaboration" is used intuitively and interchangeably with other similar terms such as "co-operation" and "co-ordination" (Hara et al. 2003). In this paper, we will use the term scientific collaboration (SC).

disadvantage of Slovenian R&D policy during the whole transitional period was that, while its strategic documents acknowledged the need to promote interdisciplinary publications co-authored with researchers from abroad or inter-sectoral publications, these measures were only normatively declared. Namely, they were not put into practice, as in many other EU member states (Tijssen 2004).

While "macro" R&D policy factors might play an important role in promoting SC, "micro" factors are even more important. In the case of micro factors, the basic question is how strongly researchers themselves are motivated to cultivate rich and productive forms of SC. However, researchers' individual motivations and practices are never completely independent of the wider policy frameworks that determine the extent and possibilities of SC. This wider policy and institutional framework at the macro level consciously or unconsciously influences the "micro-decision" (Tijssen 2004, p. 629) of researchers to build collaboration networks. But the converse also applies – the most successful R&D policy measures for SC are usually accepted if they motivate scientists at the individual level (Parker et al. 2016).

In our contribution, most attention is given to micro-decision factors, which chiefly refer to the perceptions, incentives, and personal strategies for SC from the perspective of individual scientists. These factors depend on "individual choices" (Wagner et al. 2005, p. 189) and help us understand which rational choices individual scientists make to encourage collaborative research activities.

As we empirically study this complex topic, we take the differences between scientific disciplines into account. Our assumption is that SC is especially interesting as a subject of study when researchers are separated by disciplinary boundaries. First of all, we tried to ascertain any differences between "office disciplines" and "laboratory disciplines" with regard to Slovenian researchers' propensity to collaborate. In the empirical part of our research, we combine different methodological approaches in order to obtain a more complete and informative picture of this intricate topic. The article is divided into four main sections. First, a brief theoretical overview of the factors influencing SC is presented. This is followed by the research background that also describes the research questions for the quantitative part of the study and the methodologies used in the empirical research. The third section is devoted to the analysis and a discussion of the results. The final section presents the conclusions with some recommendations for R&D policy in Slovenia.

THEORETICAL FRAMEWORK: FACTORS AFFECTING SCIENTIFIC COLLABORATION

Since SC can take various forms in practice, and as Katz and Martin write, may range "...from the very substantial to the almost negligible" (Katz et al. 1997, p. 3), we can think of numerous factors that influence SC. Such collaboration usually entails a high degree of uncertainty, and trial and error is an integral part of the processes within SC (Sonnenwald 2007). Given the diversity of this phenomenon, the theoretical concepts explaining it are not always very clearly articulated. The categories and criteria employed in previous social network and bibliometric studies intended to classify the types and factors of SC have neither been universally defined nor are mutually exclusive. They largely depend on the studied research problem and the specific sociocultural context.

Generally speaking, scientists may collaborate with each other due to complementary factors. Despite some criticism, SC is usually perceived as beneficial.[3] Some STS scholars classify the reasons for collaborating into seven general categories: scientific, political, socioeconomic, structural, social, personal, and resource accessibility. Of course, these categories often overlap and their borders are fuzzy (Klenk et al. 2010). Scientific reasons can include access to expertise, encouragement of cross-fertilisation across disciplines, etc. (Autio et al. 1996, Grey et al. 2001, Bozeman et al. 2016). It is generally agreed that scientists benefit from collaboration in terms of both scientific productivity and scientific impact. Jonathan Adams analyzed the data on research articles and reviews from the Thomson Reuters Web of Science between 1981 and 2012 (covering 25 million papers) and found that the best science in terms of impact comes from international collaboration (Adams 2013).

The list of various categories of factors that affect SC shows the primary drivers of most SC are scientists themselves. For example, the personal factors of SC pertain to expertise, social networks, trust, personal compatibility, and common professional traits (Maglaughlin et al. 2005). This list is, of course, far from exhaustive and authors dealing with this issue rarely use the same typology. The relative importance they attribute to various typologies usually depends on their theoretical perspective and the level at which they perform the analysis (Hara et al. 2003, Katz et al. 1997, Toral et al. 2011, Melin 2000, Presser 1980).

3 Some scholars have also pointed out the potential negative effects of SC (Cassuto 2016, Wray 2006). According to this view, the first concern is that collaborative research seems to threaten the motivation of scientists. This, in turn, may have adverse effects on what sorts of things scientists can effectively investigate.

Nevertheless, most STS scholars distinguish two types of motivation that drive individual scientists to engage in SC. On one hand, individual scientists have expectations about the direct benefits of SC that motivate them to collaborate (e.g., producing research of higher quality, conducting research more quickly than without cooperation). On the other hand, there are also expectations about the indirect benefits of SC (e.g., enhancing one's reputation, gaining access to further research funds) (Katz et al. 1997, Beaver et al. 1978). Sometimes these personal motivations that encourage SC are explained in terms of either the resource-based view or more specifically in terms of costs and benefits (Ponomariov et al. 2016).

One of the strongest individual motives for SC connected with the resource-based view is the desire to obtain access to the expertise and competencies of others which provide complementarities in the research process. For example, two investigators – say, one particularly skilled in experimental design, the other in data analysis – should be able to produce a better scientific result than either one working alone (Bozeman et al. 2013, Bermeo Andrade et al. 2009). In modern science, the lone scientist is no longer able to tackle most larger scientific projects. No individual scientist would have been able to sequence the human genome – this required massive manpower and diverse expertise. Sergio Toral and co-authors write that "researchers consider it more exciting working with people and groups that have different skills and viewpoints" (Toral et al. 2011, p. 21). Some scholars dealing with social network analyses connect this aspect with scientists' ability to obtain human capital (Bozeman et al. 2015, Bozeman et al. 2016, Bozeman et al. 2001, Bozeman et al. 2004, Clark et al. 2012). Human capital is understood here as the sum of skills, knowledge and social relations needed for individuals to participate effectively in the modern system of science. It improves the ability of scientists to compete for future grants because their ability to secure grants is strongly linked to their reputation and capacities as researchers.

Another important purpose of collaboration is to increase popularity, visibility and recognition (Wuchty et al. 2007, Hoekman et al. 2010, Gazni et al. 2011). Such scientists see the benefit of SC in terms of publications written by multiple authors that tend to have a higher impact on their recognition inside and outside the scientific community (Boyer-Kassem et al. 2015). Many bibliometric analyses show that scientific articles stemming from international collaborations are, on average, cited more frequently than scientific articles produced within national collaborative projects (Adams 2013, Endersby 1996). As we can see, a purely epistemic account of SC is hard to defend and the incorporation of social aspects makes SC explanations more powerful (Holgate 2012). This is true especially for international SC.

The training of young scientists is another important internal factor for SC (Whitley 2000, Kronegger et al. 2011). Young scientists' interest in collaboration is usually reflected in their striving to be mentored by a good mentor or research group during the process of their professional training. This is further expanded by the mentor introducing the young researcher into their own professional network of research contacts and collaborators, thereby providing them with greater prospects for future research and career development.

The issue of SC initiated through mentorship has attracted quite a lot of interest in classical studies in the sociology of science. In those studies, the relationship between juniors and their mentors has been imagined as a craft activity, learned by experience through "on the job" training and academic "apprenticeships." Here, it is very important that mentors teach their young colleagues personal craft skills (Whitley 2000, Campbell 2003). The well-known phenomenon of the Mathew effect in science functions on the grounds of the relationship between the mentor and the junior researcher. According to many interpretations, the Matthew effect (summarized in the phrase "the rich get richer and the poor get poorer" [Merton 1973, p. 125]) should produce a negative effect in science. Eminent scientists who have the role of mentors should be particularly favoured because in both collaborations and multiple discoveries disproportionate credit would be given to them. But, as already noted by Robert Merton, the author of the Matthew effect, this situation would primarily play a positive role in science. It leads to social selection processes that result in a concentration of resources and talent in science. For example, SC between a mentor and Ph.D. students is essential for helping to create the intellectual and social capital of these PhDs for their later scientific career. Moreover, many empirical analyses that deal with the implications of the Mathew effect confirmed that, for the publication productivity of PhDs in their later scientific career, in the earlier phase of doctoral training it was very important to work with highly reputable scientists acting as their mentors (Zuckermann 1977, Simonton 1997). Finally, scientists' interest in SC encompasses not only productivity, visibility, mentorship and an extension of skills, but also the faster "spillover" of new scientific knowledge into society at large.

Some of the factors that most frequently influence collaboration strategies are access to otherwise unavailable equipment and resources, increasing science specialization and, finally, the pleasure of working with other research colleagues (Bozeman et al.2004, Haslam et al. 2009).

Ultimately, the set of factors that enables collaboration to continue to run smoothly and successfully is strongly connected to the personality of the collaborators, namely personal compatibility, style of work, respecting deadlines and trust the assigned tasks will be done well (Hara et al. 2003).

This can typically only be adequately judged in the longer term and is often the reason that specific collaboration is discontinued or does not lead to a new collaboration effort with the same collaborators.

This overview of the motives stimulating scientists to collaborate is of course incomplete. However, while most of the former are analyzed in the qualitative analysis, only some of those selected are included in the quantitative analysis.

BACKGROUND FOR THE EMPIRICAL ANALYSIS: RESEARCH QUESTIONS AND METHODOLOGIES

In our empirical investigation, we explore the views of Slovenian researchers about their positive and negative experiences with SC, and the factors influencing their decisions about whether to join and actively participate in research collaboration networks. This was achieved by a limited questionnaire analysis and more extensively by a qualitative approach. Our first research question to be addressed by the quantitative approach concerned the perception of the benefits of collaboration. More specifically, the research question was: Are those scientists who perceive SC benefits to be high more willing to collaborate? The second research question was whether there are differences between "office disciplines" and "laboratory disciplines" with regard to the propensity to collaborate.

In differentiating between office and laboratory disciplines, we relied on evidence from previous studies in the sociology of science (Ziman 2000, Whitley 2000). According to these studies, the scientific disciplines which depend on a crucial institutional and organizational framework in order to conduct their scientific activities may be classified as laboratory disciplines. These usually require special research infrastructures and large research groups. Here, we can talk about the existence of a type of "collaborative imperative" (Bozeman et al. 2016, p. 1718). In the case of office disciplines, research can be conducted in the office and by only a few researchers.

Methodology and data

Our empirical analysis employed not only a standardized quantitative survey among researchers from the selected scientific disciplines, but also in-depth

qualitative interviews among a small group of "intellectual leaders"[4] in the Slovenian scientific community. We included the results of 18 interviews with top scientists from selected scientific disciplines within a broader interpretative framework, assuming they could provide better in-depth reflection on the up- and downsides of internal (scientific) as well as external (policy) mechanisms that encourage SC.

The quantitative approach was conducted by a web survey (the Computer-Assisted Self Interviewing technique was used) on a large sample of scientists (researchers were selected from those registered in the Slovenian current research database [SICRIS]).

The data were collected over two different time periods within a larger study in which many different research questions were addressed. The survey consisted of around 50 survey questions and only a few are analyzed in this paper. Moreover, the researchers from nine very different scientific disciplines (physics, mathematics, biotechnology, sociology, economics, materials, neurobiology, plant production and historiography) were selected to cover as wide a field of scientific activity as possible. Therefore, different scientific disciplines were selected in both time periods.

The questionnaire was sent out to a total of 2,469 researchers. In the first period of the survey (in 2010) the questionnaire was sent out to all researchers from physics, mathematics, biotechnology and sociology (a total of 662 researchers). After two reminders, the response rate was 52%. In the second period (2015) the same questionnaire was sent out to all researchers from economics, materials, neurobiology, plant production and historiography (a total of 1,807 researchers). This time, two reminders were sent and the response rate was 31%. An analysis of the data from the first survey period was recently published by Iglič et al. (2017).

At the end of both surveys 893 responses had been received, although not all respondents had completed all questionnaire segments. Regarding the classification into office and laboratory disciplines, 44% of respondents were from office disciplines and 56% from laboratory disciplines. Regarding gender, the respondents were about evenly matched in both groups of scientific disciplines (52% male and 48% female). For more details of the respondents' distribution by gender and discipline, see Table 1.

4 The group of "intellectual leaders" in the Slovenian scientific community consisted of scientists who had obtained excellent scientific results and in the past or currently held leading (management) positions at their institutions.

Table 1 *Survey respondents by sex and discipline*

	Male	Female	Total (100%)	Type of scientific discipline
Time period: 2010	**209**	**127**	**336 (38%)**	
Mathematics	64	20	84 (9%)	office
Sociology	42	50	92 (10%)	office
Physics	89	17	106 (12%)	laboratory
Biotechnology	14	40	54 (6%)	laboratory
Time period: 2015	**255**	**302**	**557 (62%)**	
Economics	62	94	156 (17%)	office
Historiography	28	34	62 (7%)	office
Materials	85	72	157 (18%)	laboratory
Neurobiology	32	45	77 (9%)	laboratory
Plant production	48	57	105 (12%)	laboratory
Grand total (%)	**464 (52%)**	**429 (48%)**	**893 (100%)**	

The qualitative part was conducted through in-depth interviews with selected representatives from each of the nine scientific disciplines included in the quantitative survey. Eighteen in-depth interviews were conducted. The interviewees were chosen according to two criteria: at the time of interview they were playing an active expert role in Slovenian R&D policy institutions, and they had demonstrated scientific excellence in terms of research results. In other words, our interviewees had to show some kind of intellectual leadership in their research area. This qualitative approach provided us with a wide spectrum of contextual information. The interviews were audio-recorded and transcribed. After gathering this extensive material, we used matrix mapping for the analysis. This method helped sort the material according to key issues and summarize the respondents' perceptions.

Measuring the perceived importance of scientific collaboration and the time spent on collaboration

Our main interest in the quantitative empirical part of the research was to investigate whether the perception of the benefits of SC affects the amount of actual SC (the first research question). As noted in the theoretical part of our discussion, researchers' decisions to join networks are connected with their expectations about the direct and indirect benefits of such collaborations.

Birnholtz (2007) conceptualized and operationalized propensity for collaboration. To measure this concept, he proposed five indicators which were all included in our survey (all survey questions were translated into Slovene). Since two indicators (*"I plan to engage in collaborative research in the future,"* and *"Collaboration is necessary in my field"*) were not sufficiently correlated with other indicators, they were not included in the analysis. Therefore, the following indicators were used in the research to measure the perceived benefits of SC:

- *"Researchers who collaborate with other researchers are more successful than those who do not."*
- *"Collaboration with other researchers can benefit my career."*
- *"Collaboration can help me tackle research problems."*

For each indicator, the participants indicated their level of agreement on a five-point ordinal scale (from "strongly disagree" to "strongly agree"). Cronbach alpha values are 0.80 for the first point in time and 0.78 for the second, showing a good level of reliability of measurement.

In general, the respondents agreed or strongly agreed with all the measured potential benefits of SC (Table 2).

Table 2 *The perceived benefits of SC of the surveyed group of researchers*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	n	Average	Standard deviation
	percentages							
Time period: 2010								
Researchers who collaborate with other researchers are more successful than those who do not	1	1	8	40	51	324	4.38	0.74
Collaboration with other researchers can benefit my career	0	2	4	39	55	318	4.48	0.65
Collaboration can help me tackle research problems	0	1	7	38	55	322	4.47	0.65

Time period: 2015								
Researchers who collaborate with other researchers are more successful than those who do not	1	0	3	30	65	530	4.58	0.67
Collaboration with other researchers can benefit my career	0	1	4	37	58	531	4.52	0.63
Collaboration can help me tackle research problems	0	0	2	39	58	531	4.54	0.58

Considering the Likert scale (sum of the three variables), on average, the researchers interviewed in 2015 perceived the importance of SC as being more important than those interviewed in 2010 ($p < 0.05$) (Table 3).

Table 3 *Perception of the importance of SC (Likert scale)*

Time period	n	Average	Standard deviation	Mean difference	Welch's -test		
					t	*df*	*p*
2010	**316**	**4.45**	**0.58**	0.10	2.54	634.6	0.01
2015	**528**	**4.55**	**0.53**				

In order to measure the extent of the actual amount of work done in collaboration, the respondents were asked "What share of your research work over the last 12 months was spent in collaboration with different types of co-workers?" To answer this, they had to distribute the total amount of time, expressed in percentages, among different categories of co-workers, where the first category was "individual work." Based on the percentage shares assigned to each category, the variable expressing work time spent on collaboration was calculated as . On average, the researchers who were interviewed in 2010 spent 58% (with a standard deviation of 23.9%) of their working time in collaboration with others, while those researchers interviewed in 2015 spent 4% (with a standard deviation of 25.0%) less of their working time collaborating with others. The difference is small, although statistically significant ($p<0.03$, see Table 4).

Table 4 *The share of time (in %) spent on collaboration*

Time period	n	Average	Standard deviation	Mean difference	Welch's -test		
					t	*df*	*p*
2010	**292**	**58**	**23.9**	-4	-2.16	621.77	0.03
2015	**532**	**54**	**25.0**				

To study how the perceived importance of SC affects the share of research time spent on collaboration, Multiple Group Structural Equation Modelling (SEM) (Ullman et al. 2003) was applied. To estimate the parameters, the DWLS (Diagonally Weighted Least Squares) estimator was used. The latter was employed since it provides more accurate parameter estimates when the variables are measured using ordinal scales and when their distribution is not normal (Mindrila 2010). The analysis was completed using the lavaan R package (Rossell et al. 2016).

EMPIRICAL FINDINGS AND DISCUSSION

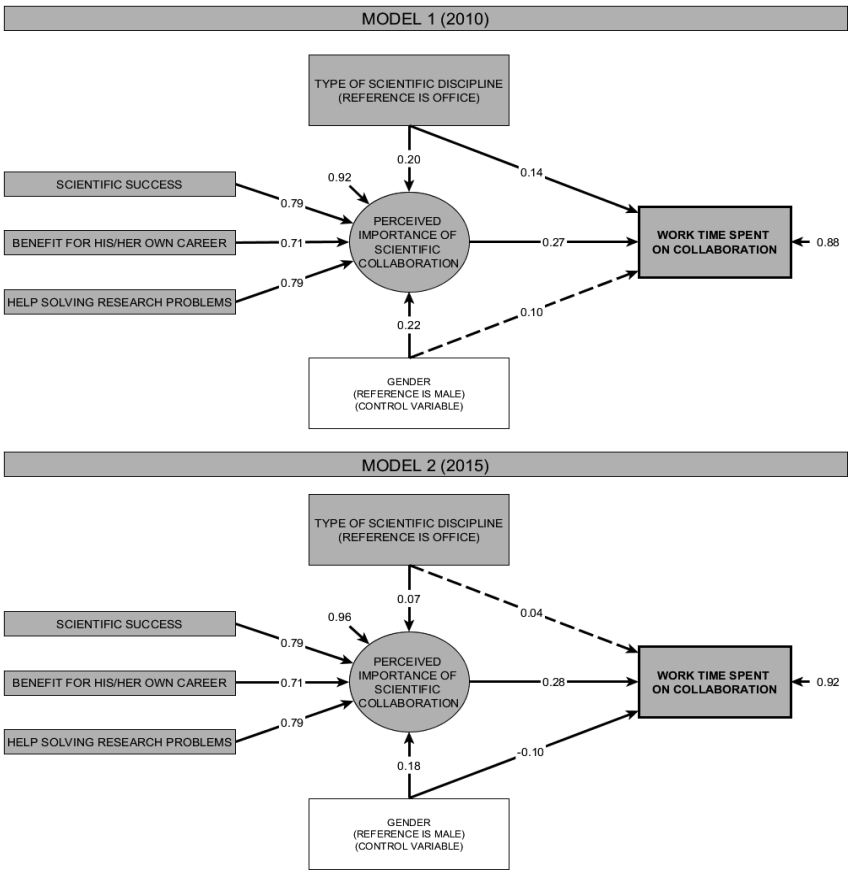
We first present the structural equation model used to study the impact of some of the personal factors on SC. As noted in the theoretical part of our discussion, national and transnational R&D policy decisions have a big impact on SC at the macro level. Second, in the qualitative part of our study, we focus on the micro-decision factors that relate to the personal strategies of individual scientists.

Impact of the perceived importance of sc and the type of scientific discipline on the time spent on collaboration

To study the impact of the perceived importance of SC and the type of scientific discipline (office vs. laboratory) on time spent on collaboration, we used multiple group SEM (groups were defined by the two data-collection time periods). Besides these variables, gender (0 – male, 1 – female) was included as a control variable, assuming that it affects both the importance of SC and the estimated time of work spent on collaboration. Weak invariance between the two groups of researchers is confirmed (χ^2=12.46, df=2, p=0.54), meaning the factor loadings can be considered as being equal across the two groups of researchers.

Model 1 (data collected in 2010): Both the type of a scientific discipline (laboratory or office) and the gender affect the perceived importance of SC. Those from the laboratory category of scientific disciplines consider, on average, SC as being more important than those from the office category. Females also consider SC as more important than males. A stronger impact (according to the standardized values of the regression coefficients) on the perceived importance of SC is shown by gender, followed by the type of scientific discipline. The model explains 8% of the variability in the perceived importance of SC.

Figure 1 *The SEM model with standardised regression coefficients and factor loadings*



The dashed lines are for non-statistically significant effects at $p<0.05$. $\chi^2=16.9$, $df=14$, $p=0.26$; $CFI=0.99$, $TLI=0.99$, $RMSEA=0.02$.

The impact of the perceived importance of SC affects the share of research work done in collaboration with other scientists ($p < 0.01$). Not surprisingly, those who consider SC as more important report a higher share of research time spent collaborating with others. However, the category of scientific discipline ($p < 0.05$) also affects the share of time spent on collaboration, but the value of the standardized coefficient is lower (0.14) than the one corresponding to the importance of SC (0.20). Researchers from the laboratory category of disciplines report spending more work time spent collaborating with others. The value of the regression coefficient of gender is not statistically significant ($p = 0.13$) and hence one cannot say that gender affects the actual share of work spent on collaboration. The model explains 12% of variability in the share of time spent collaborating.

Model 2 (data collected in 2015): Even though females perceive SC as more important than males on average ($p < 0.05$), they spend less working time collaborating than males ($p < 0.05$). There are statistically significant differences in the perceived importance of SC between the office and laboratory scientific disciplines ($p < 0.05$) than was the case in Model 1, but the value of the standardized regression coefficient is lower (0.07 vs. 0.20). Yet, the difference in the actual time spent collaborating (between the office and laboratory types of scientific disciplines) is not statistically significant ($p = 0.39$). There is a positive impact of the perceived importance of SC on the time of work spent on collaboration. The model explains 8% of variability in the estimated share of time spent collaborating and 3.5% of variability in the estimated actual time of work spent on collaboration.

How Slovenian intellectual leaders view the advantages and disadvantages of scientific collaboration

In order to shed light on the whole (macro and micro) context of SC, we decided to complement our quantitative analysis with qualitative interviews conducted with a small number of top Slovenian researchers. Our assumption was that this would be an important source for a deeper study of the wider dimensions of SC in Slovenia.

Concerning the perceived benefits of SC, the 19 intellectual leaders in Slovenia who were interviewed in some sense confirmed the results of our survey analysis. Namely, all of them stated they prefer to work with colleagues with whom they are close in terms of the working environment and common research topics. Further, they were all predominantly involved in international R&D projects, meaning they are aware of the importance of the internationalization of science in small countries.

Concerning the factors they perceive as most problematic for SC, the intellectual leaders especially stress the various kinds of difficulties in establishing co-operation with professional colleagues from different disciplines. In this regard, it is sometimes more difficult to harmonize the elements of a common research interest (differences in methodologies and subjects can be large even within a single discipline) than to find the proper "'personal chemistry." Given the division between laboratory and office disciplines, it is interesting that it was an interviewee from sociology who very strongly emphasized the problem of extreme specialization in his discipline: "*I feel there is great deal of fragmentation within my discipline, which is not based on subject differentiation, but is instead interest-driven, with small islands of power protecting their own territory and resources. This hinders efforts at inter-institutional and also interdisciplinary collaboration. Further, it makes it more difficult to establish communication with a more developed, international environment."* The interviewee from the field of economics assessed that, because her discipline is more applied, there is also less problem with SC between disciplines: "*Because our research is more applied, it is also more widely based on various kinds of interdisciplinary co-operation*".

Concerning R&D policy support for inter-sectoral SC, which in the theoretical part of this paper we defined as the so-called macro factor, most of the Slovenian intellectual leaders were extremely critical. Especially those from the "laboratory" disciplines mentioned the lack of adequate policy mechanisms for increasing inter-sectoral collaboration. The interviewee from the field of biotechnology assessed that the policy of the Slovenian Research Agency (for example, the R&D evaluation methodology it uses) is unsuitable for promoting strong cooperation between R&D teams from the academic and the business-enterprise sectors. A similar opinion was expressed by the representatives of other laboratory disciplines.

Given that all our interviewees belong to the elite group of Slovenian scientists and they have been very active in various international R&D networks throughout their careers, it is not surprising that they strongly emphasize the need for Slovenian science to become more internationalized. The interviewed biotechnologist said that international collaboration is a "must." He noted that Slovenian researchers must be more ambitious in applying for EU projects, especially by assuming the role of project coordinators. "*We do not need further fragmentation of our already scarce R&D efforts in mutual competition for EU R&D projects*." The historiographer criticized the parochial orientation of his discipline: "*Better international collaboration would require a more rational structuring of the Slovenian capacities, the merging of different groups, to be able to compete abroad. The ethnocentricity of Slovenian historiographic*

research often narrows the possibilities for wider international collaboration." In presenting the opinions of Slovenia's intellectual leaders, we should emphasize one additional remark. All interviewees expressed the view that, in order to join EU projects, as a rule it is extremely important to have some prior informal connections (getting in touch with the authors of a scientific paper, meeting at a conference, etc.) with the proposed future collaborators.

Concerning the factors that influence researchers' decisions to collaborate, the key factor identified as essential by representatives of the Slovenian scientific elite is the ability to produce better research outcomes in the first place. Namely, as most of them agree, the first benefit (i.e. achieving the best research results), logically leads to the second-most important benefit: the possibility that, based on good scientific results, they can increase their appeal as potential collaborators in the international arena. Or, as the physicist said: "*The internationalization of Slovenian science, which is based on collaboration with excellent scientific centers abroad, has many positive effects. In the natural-technical sciences in Slovenia, about 20 years ago an important 'leap' occurred if we measure the quality of scientific results with publications in the most prestigious international scientific journals. In the old times, Slovenian natural scientists had not published one single article in journals such as Nature and Science. Since the mid-1990s, the situation has changed dramatically."*

All interviewees also pointed out the critical importance of possessing and developing a good network of personal contacts, especially in "mentorship networks." Many mentioned how important it is to help young researchers enter their networks which, for these young researchers, is a prerequisite for successful collaboration throughout their later researcher careers. In this regard, the interviewee from historiography criticized the restriction that excludes retired researchers from further participation in research projects and programs, which means losing their valuable networks. This support can be seen as helping young researchers join already established networks of senior researchers and develop their own connections. The sociologist pointed to another problem connected with the "transition" processes in research networks which originates from the current employment crisis facing young researchers in Slovenia. Namely, if young researchers have no prospect of obtaining a permanent research position and are treated as a burden or unnecessary expenditure, the intergenerational process of building collaboration will be interrupted and the contacts will be lost.

Also quite expected were our interviewees' opinions about the role of trust in initiating and forming new types of collaboration. They are aware that SC requires a degree of warranted (not naive) trust and trustworthy behaviour, which is expected to be based on the ethical values of honesty and fairness. Without

this, any kind of research activity quickly becomes riddled with defensive ploys. Accordingly, many interviewees mentioned that collaboration can follow less predictable patterns, and that previous contacts and informal connections are often a prerequisite for more formal collaboration, when collaborators have already determined each other's expertise, trust, reliability, and other individual factors. Another element continuously repeated as crucial for establishing successful collaboration was having common research problems, needs and goals.

CONCLUSION

In our contribution, we started with the assumption that SC is a complex phenomenon that can take many forms. Since SC can take place in different formats, the personal factors affecting SC are also numerous and diverse. The focus of our empirical interest was whether the expectations of Slovenian scientists regarding the direct or indirect benefits of SC significantly affect the share of research time they spend on SC. Our analysis included mainly expectations regarding some type of benefit from SC. By predominantly focusing on scientific success, scientific career, and solving scientific problems, we concentrated only on some of the most important factors which motivate scientists to collaborate. Perhaps this restriction is too narrow and a more general set of direct and indirect benefits is the most significant limitation of our contribution. As we mentioned in the theoretical part, it is impossible to present all the motives that drive scientists to become engaged in SC. Nevertheless, the results of our analysis point out very clearly that individual expectations about the benefits of collaboration play a prominent role in scientists' pragmatic R&D strategies. In other words, scientists operate – to use the terminology of Max Weber – as "rational actors" in their decisions to invest time in various forms of SC. It was also not surprising that our empirical analysis confirmed that scientists from the laboratory category of disciplines, on average, tend to collaborate more than scientists from the office category. Various reasons explain why Slovenian researchers socialized in laboratory disciplines are more inclined to adopt the "cognitive culture" of SC. In our contribution, we explained these differences derive not only from internal cognitive, but also from external social factors. These cognitive/social differences between the two categories of disciplines regarding participation in SC were further highlighted in our in-depth interviews with the intellectual leaders of Slovenian science. The latter provided broader reflections on the role of macro R&D policy factors which might be

important for initiating and promoting the collaboration of Slovenian scientists in the international arena. Their strong criticism of R&D policy mechanisms regarding various types of SC additionally support the view that in Slovenia the micro-decision factors, which mostly relate to active researchers' personal collaboration strategies, are basically the most important. Thus, as we can see, Slovenia still lacks adequate R&D policy mechanisms (financing, evaluation, etc.) that would reorient the majority of scientists towards the establishment and development of collaborative structures in the international (and not local) environment.

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VOTING RIGHTS AND INTERGENERATIONAL JUSTICE: FRAMING EFFECTS AND VOTER ATTITUDES

Béla Janky - Attila Gulyás[1]

ABSTRACT *We investigate attitudes toward voting reforms that attribute greater weight to younger generations in a survey experiment. The main assumption of this research is that due to the distortions caused by elite discourse, voters are not aware of the intergenerational inequality of redistribution, thus attempts to change the voting system – that currently provides an equal vote to each voter, thereby maintaining inequality – would not get sufficient public support.*

After providing a review of potential voting reforms for improving intergenerational justice, we present results from an online survey sample of one thousand respondents. The data show that presenting the arguments for intergenerational justice increases the sensitivity of younger voters towards the political rights of young generations, but does not improve the acceptance of such reforms among the middle-aged and the elderly.

KEYWORDS: *intergenerational justice, voting right, survey-experiment, Hungary*

INTRODUCTION

Our study examines support for voting-rights reforms that could better represent the interests of young and future generations compared to current voting systems based on equal votes. These reforms include giving additional votes to families with children; increasing the weight attributed to younger

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voters; and decreasing the voting age. We do not focus on the sociodemographic background to the current attitudes. Rather, we investigate the relationship between public discourse and support for the such voting-rights reforms.

The research question employed in the study concerned how the framing of state redistribution mechanisms affects the sensitivity of young generations to the voting rights of future generations. The main methodology for this research was a framing survey experiment involving respondents reacting to the survey after having been presented with specific forms of information about redistribution-related dilemmas.

First, we assume that in the public discourse about the role of the state the intergenerational aspects of state redistribution are usually neglected. Therefore, voters do not perceive the intergenerational injustice of current welfare regimes, resulting in their being insensitive to the intergenerational justice coded into the current voting system. Survey-based experiments can simulate the long-term effects of complex discourses to a certain extent, as well as the short-term effects of presenting several aspects of the problem to respondents. Using such a survey experiment with pre-survey framing we were able to investigate these effects. We assume that such an analysis could help with understanding the role of public discourses on attitudes.

In our experiment the online sample of one thousand adults were split into four groups of equal size. The first group of respondents answered three questions related to voting-rights reforms without any manipulations, and thus served as the control group. The questions focused on support for voting-rights reforms that award greater voting weight to younger generations. Another randomly generated group watched a short framing video that discussed state redistribution dilemmas in line with the current public discourse before completing the survey, which also contained a few attitude-related questions before the questions on voting-rights reforms. The framing video for this group highlighted the intragenerational aspects of redistribution, including the dilemmas involved in supporting the poor via taxation of the working population.

The third random group was presented with information similarly framed, but in their case the framing video highlighted intergenerational redistribution issues through presenting the dilemma of making elderly or large families the beneficiaries of redistribution.

The fourth group did not watch a framing video but were exposed to some priming questions in their survey that intentionally conflated Roma people with large families and those on welfare before the questions about voting rights.

Our results partially confirm our expectations, and suggest that presenting information about aspects of intergenerational redistribution does increase the sensitivity of younger respondents to the political rights of younger generations,

but does not decrease the overall level of rejection of voting-rights reforms among the middle-aged and the elderly. An interesting result is that better educated respondents are more likely to reject such reforms than less educated respondents.

In the following section we review issues surrounding intergenerational justice and the reforms of voting rights that have been proposed in this domain. These suggestions served as a basis for the survey. We then describe the theories and results used to formulate our hypotheses that explain voter preferences relating to the dilemmas of intergenerational redistribution. The following two sections present the methodology and the results. We conclude by summarizing our results and giving an overview of the lessons learned during this work.

INTERGENERATIONAL JUSTICE: THE CLASHING INTERESTS OF GENERATIONS

Our research focuses on the potential for voting-rights reforms that ensure the representation of future generations' interests to a much greater degree than current systems. Here, we do not aim to give a detailed analysis, but rather constrain ourselves to a discussion of the political possibilities of these reforms.

The decisions of current generations influence future generations' possibilities negatively in many aspects. The most frequently mentioned domains are environmental problems (Arnell 1999; Hackl and Pruckner 2003; Lumer 2009) and the fiscal policies that lead to the accumulation of public debt (Alesina and Tabellini 1990; Kopits 2007; Penner and Steuerle 2007). In the current decade not only has the concept of intergenerational justice became more prominent in these domains, but several indicators have been developed to allow related comparisons across countries (McQuilkin 2018; Vanhuysse 2013b).

The importance of environmental factors is widely accepted today among the majority, yet the policies that are designed to save natural resources and react to climate change are often rejected due to the conflicting interests of private consumption. Put another way, this involves a collective action dilemma: individuals create a "public bad" – although they know what should be done, they are not willing to do it (Hauert, Wakano, and Doebeli 2008). This is despite the fact that over the last two decades (due to the rise in awareness about these issues) governmental actors have put considerable effort into conserving the Earth's natural state and dealing with the challenge of the overuse of natural resources, with the support of most of the public of developed countries.

Although the environment is a key topic in intergenerational justice and ideas about sustainable development, our research focuses on another similarly

important issue that receives much less attention in public discourse: the effect of state overspending on future generations; or, in other words, accumulating government debt and other related fiscal balance issues (Buchanan and Wagner 1977; Kopits 2007). Usually, decisions about public or governmental debt levels are considered under this topic, yet many consider the individual-level dilemma of childbearing to involve similar challenges. The former dilemma involves the accumulation of state debt and the sustainability of pension systems (Noord 1993). State debt presents a threat to intergenerational justice, as for sustaining present generations in the future, the taxes and social contributions of future generations will be spent. This situation can be thought of as a sustainability issue for pension systems: active generations will need to provide such levels of support to elderly generations that they will not be able to support themselves as pensioners given current demographic trends (or only through increased tax burdens on future generations).

Our research question concerns how voters relate to the inequalities in the intergenerational redistribution of state expenditure. This dilemma has already been discussed by numerous economists in the domain of political behavior and state redistribution in the last decades by using the "selfish voter" model to explain redistribution outcomes. The basis of the rational voter model, meanwhile, is the clear and concise theoretical analysis of Browning (Browning 1975). The rational voter in this model participates in a one-time vote about the parameters of the social security system (for the sake of simplicity, we focus on pension systems only), and each voter is driven by self-interest corresponding to their age. Elderly voters – pensioners – thus vote for large pensions and are not interested in the level of taxes and social contributions. Voters active on the labor market prefer to decrease current taxes and are indifferent about the level of their pensions. However, voters are not only selfish but they are prescient as well, hence those near retirement age would prefer high taxes and pensions as they consider that they would in the long term be better off under this scenario, even considering the present higher level of taxes. Thus, these voters may vote similarly to pensioners out of pure self-interest.

In Browning's model, overspending on social security is caused by current pensioners, and those close to retirement age will vote for a pension system that is unsustainable in the long term to sustain their current pension and well-being at the expense of future generations.[2] Based on this model, active middle-age voters would also favor a generous pension system, while younger voters would be against it.

2 For a more detailed analysis of this model, see Galasso and Profeta (Galasso and Profeta 2002).

Browning's model was later refined,[3] but its main approach to political economics did not change: the claim remains that the elderly will support an unsustainable pension system, while youngsters may form a voting coalition against free-riding on future generations.

The explanations of such phenomena in classical sociology sharply contrast with self-interest based interpretations of economics. Yet, in our models this self-interest is replaced by a preference for collective interest representation based on class-consciousness.[4] The conclusions of theories based on class-consciousness make similar predictions to those of self-interest-based economic models regarding preferences for intragenerational redistribution. However, conclusions diverge in terms of intergenerational redistribution: class-solidarity may suppress the issues involved in intergenerational redistribution (Street and Cossman 2006). However, many sociologists have previously questioned the political behavioral models that rely on classical class theories and instead projected a struggle between different generations in postmodern welfare states (Foner 1974; Turner 1989, 1998). This model of political sociology is hardly distinguishable from the model of purely self-interest driven voters, yet the thesis of an age-class struggle has largely been rejected in mainstream political sociology (Hamil-Luker 2001; Irwin 1996, 1998; Street and Cossman 2006).

INTERGENERATIONAL JUSTICE: ADVOCACY OF FUTURE GENERATIONS

Regarding the differences between generations, future generations are mostly at a disadvantage in terms of advocacy. In our study we refer to advocacy in political institutions and decision making as future generations cannot participate in decisions that influence their future lives directly. Future generations do not only include children of below voting age, but also those unborn children whose lives will be affected by any long-term decisions. Although these children currently do not have rights per se, they will have rights in the future that should be respected.[5] Hence when mentioning 'long-term' effects we refer to those effects that span generations –which the affected generations cannot influence at all.

Hence, the advocacy of future generations is hindered by the partial impossibility of interacting with the current (voting) generations. For the former

3 For example, on the inclusion of the combined effect of in-family altruism and material inequalities, see Tabellini (Tabellini 2000).

4 See Manza and Brooks (Manza and Brooks 1999) for an overview.

5 For a thorough discussion of the future rights of children yet unborn, see Tremmel (Tremmel 2006).

it is physically impossible to sanction any decision by current generations which might hurt them in the future – such decisions include economic decisions (superfluous state overspending), as well as environment-related decisions (deforestation, or the overuse of polluting technologies). Either decision could damage the well-being of future generations compared that of current generations. The self-advocacy of children would theoretically be possible, but of course children are usually not mentally mature enough to perceive the magnitude and consequences of such decisions. For the unborn, the option is not even theoretically possible.

In the following section we mention a few of the institutions dedicated to advocating for the rights of younger generations with the goal of dealing with the above-mentioned challenges. We describe two approaches: the representation of future generations via voting rights or institutions; and legislative constitutional and institutional barriers. Although our study focuses on voting-rights-related issues, we consider it important to have a brief look at other methods of representation.[6]

REPRESENTING FUTURE GENERATIONS – POLITICALLY, LEGALLY AND CONSTITUTIONALLY

Future generations can be represented directly by legal personnel or institutional bodies. In practice, such representation includes parliamentary advocates, or different committees (including environmental or economic committees). In the case of such forms of representation, although future generations are represented by the living and the issues under debate may be analyzed from the perspective of future generations specifically, the former do not participate in nominating the actual decision-making bodies. However, they may have veto-rights and some limited authority in decision-making. Thus, the most important prerequisite of such a representational body is political independence.

A typical solution for the institutional representation of future generations in decision making is representation through fiscal councils and authorities (Debrun and Kumar 2008; Hagemann 2010). The activities of such bodies may include producing forecasts, reviewing budgetary planning, and even actual participation in decision-making. The most significant advantage of independent fiscal councils is that fiscal policy can thus be made independent from political cycles, hence better fiscal discipline can be created – provided that councils are

6 These methods are discussed in detail by Jakab (Jakab 2016)

indeed independent and possess sufficient authority with fiscal policy. There are many examples of such fiscal councils in EU countries, most of which play an advisory role in budgetary planning (Hagemann 2010). In Hungary, the Budgetary Council (*Költségvetési Tanács*) was founded as such an institution in 2008, and makes proposals about annual budgets.

Future generations can also be represented by other committees and advocates (ombudsman) that are not necessarily related to fiscal policies. Examples include New-Zealand, Canada (commissioners) and Israel, Brazil, Germany, and Chile (committees). Unfortunately, Hungary is not among these countries, as while one such institute did exist (the institute of the *Ombudsman for Future Generations* (Jávor 2006; Jövő Nemzedékek Országgyűlési Biztosa 2008) it was abolished in 2012 and was integrated into another institution that works with fundamental rights and has no specific focus on future generations, the *Ombudsman For Fundamental Rights* (Fülöp Sándor 2012).

It is easier to find examples of legal representation. In several legal cases a multitude of bodies have represented the interests of future generations (in these cases, the future generations were interpreted as the plaintiffs): federal states in the USA (Göpel 2009), a special court body in Australia (Department of Justice and Attorney General 1979), and simply a group of children in the Philippines (The Supreme Court of the Philippines 1993). In other cases, a single person (*amicus curiae*) whose knowledge may contribute to understanding the details of the case from the perspective of future generations may assist the work of the court. Strictly speaking, the animus curiae is not a direct representation of future generations, but rather a professional form of court support with a focus on upholding the interests of future generations (for a few recent examples, see Center for International Environmental Law 2017; Our Children's Trust 2016).

The constitutional representation of future generations is also considered a form of legal representation. This usually covers the recognition of general responsibility towards future generations (as in the constitution of the Czech Republic, Poland, and Switzerland) or environmental responsibility (Italy, Netherlands, and Latvia). Debt brakes and upper limits on state deficits in constitutions (Finland, Germany, and Poland) should also be considered a form of representation of future generations, as respecting these limitations is in their interest.

Hungary's constitution also includes several paragraphs similar to these mentioned above – involving the need for the protection of environmental and cultural goods, the call for restrictions on the size of the state debt, and principles for the use of public property. The role of the Parliamentary Commissioner of Future Generations was taken over by the Commissioner of Fundamental Rights and its institutional background, although enforcement of the constitutional clauses faces several obstacles not discussed here.

REPRESENTATION OF FUTURE GENERATIONS – VOTING RIGHTS

Providing the right to vote to children and delegating that right to their legal parents was proposed by Paul Demény (Demény 1986) and became publicly known as "Demeny-voting" (or "proxy-voting"). Among the three voting right reforms investigated in this paper, this approach has sparked the most debate and come closest to actually being introduced.

In the original concept, children are provided with a vote that is split between parents until the child reaches voting age. The proposal can easily be applied to to non-conventional families. The true novelty of this proposal is not that a child's right is transferred to the parent, but that children are included among voters. This does not involve the direct representation of children, and does not address those not yet born, but we can assume that parents would cast votes so as to represent the interests of their children and other descendants.

The introduction of Demeny-voting was considered in several countries as a means of representing future generations, including Japan (Aoki and Vaithianathan 2009, 2010; Vaithianathan, Aoki, and Sbai 2013), Germany (Deutscher Bundestag 2003), and Austria (Vanhuysse 2013a). For various reasons, this proposal was not finally introduced.

A common counter-argument is that parents may not be competent to cast their children's vote; furthermore, they could abuse this extra vote in their own self-interest. The first counter-argument may easily be refuted with the argument that if parents were unable to assess the effects of any political or economic decisions on their children's well-being, they would similarly be incapable of doing this for themselves. Following this counter-argument, parents' own rights to vote are made questionable.

In terms of parents misusing their children's votes, there is some evidence that parents would cast the votes of their children for a different party than the one they would personally vote for (Aoki and Vaithianathan 2012). In the related study, more than one-tenth of respondents engaged in such behavior. However, these results do not document if the other respondents considered their own preferred party as a good alternative for their children, or if they were indifferent in this regard. Regardless, this experiment shows that voters would be willing to consider the interest of their children.

Besides this issue, there are other challenges to Demeny-voting. Governments may make decisions that affect not only the living, but also those not born yet. Extending and delegating voting rights would not be a solution to this. Another technical issue would be applying Demeny-voting to non-conventional families such as households with one parent, step-parents, and orphanages.

Another option for empowering younger generations in a voting system is age-weighted voting. In this system the weight of an individual vote depends on the voter's age. The basis of this idea is that younger voters have to live with the consequences of their votes for longer than elderly voters. Such reforms have not made their way into scientific discussions, but are the subject of media interest (Martin Hiesboeck 2016; Moraro 2016) and are presented as an interesting alternative. A recent analysis of the Brexit vote raises the issue of the potential consequences of using weighted votes to decide about issues of a similar historical weight (Nouvellet 2017).

Alongside these possibilities, lowering the voting age in general often also arises as an alternative. There are a few examples of places where voters of less than 18 years old are allowed to vote (16 yrs: Austria, Brazil, Cuba, Somalia, Nicaragua; 17 yrs: East-Timor, Indonesia, Sudan, North-Korea), while in Germany the same was suggested regarding local elections (reducing the voting age to 16 years). Evidence for the positive effects of lowering the voting age is mixed. (Bergh 2013; McAllister 2014; Wagner, Johann, and Kritzinger 2012; Zeglovits and Zandonella 2013). Some studies find that that lowering the voting age increases the maturity of the youngest voters (at the age of 16), while others do not find evidence for this. Nonetheless, the common goal of these approaches is to foster the engagement of youth in democratic processes.

INTERGENERATIONAL JUSTICE AND PUBLIC OPINION: EARLIER FINDINGS AND HYPOTHESES

In terms of intergenerational justice, young generations (especially those not yet born) are prone to be affected by the kindliness and responsibility of the currently active and the elderly. However, future generations have no influence on the decisions of the former, neither can they sanction decisions that will negatively affect them.

Preferences for intergenerational redistribution have been analyzed through attitudes towards the pension system, and studies have not confirmed predictions based on models premised on self-interest. This does not mean that age is not a main driver of attitudes towards pensions, but the effects of ideological concerns and status properties prove to be much stronger (Boeri, Boersch-Supan, and Tabellini 2002; Boeri and Pestieau 2004; Els, End, and Rooij 2003; Evans et al. 2004; Gelissen 2001; Hamil-Luker 2001; Silverstein et al. 2000; Street and Cossman 2006).

Current trends in economics and sociology highlight the possible impact of some universal moral sentiments driven by concerns of fairness independent of

self- or class-interest (in Hungarian see [Gulyás 2007]). These desires include a wish to respect "deservingness" and to respond to neediness in terms of the distribution of benefits. Polls indicate that the support of younger generations for the level of benefits for the elderly can be explained by a belief that the elderly have earned their benefits through their lives' work. On the other hand, public opinion is much more divided in the case of benefits for children (the working force of future generations); one selection criterion is often the ethnic background of the family which would potentially benefit.

Both traditional models based on class solidarity and novel models driven by fairness concerns predict that excessive support for the elderly versus future generations is the result of a public discourse that is focused on intragenerational redistribution. People simply do not consider *inter*generational justice and simply are not aware of the imbalance caused by redistribution. However, the impact of public discourse on redistribution is recognized in refined models involving voters who are driven by pure self-interest, and individuals who lack information. In the literature such distortions are often assumed, and the dual nature of the welfare state is also emphasized: firstly as a state that redistributes goods from the rich to the poor within generations (a 'Robin Hood' state) but at the same time one which accumulates savings to support a life-course model (a 'piggy bank' state).

Our main thesis which grounds the empirical study can be deducted from this position: the reason for voter negligence of the interests of future generations is that the state's redistribution discourse excludes intergenerational justice concerns, and focuses on the state's 'Robin Hood' function. If intergenerational aspects were present in public discourse, voters would consider the associated moral sentiments as well, hence they would support reforms leading to the better representation of the interests of future generations. These include voting-rights reforms resulting in the greater incorporation of future generations' interests in decision-making, besides direct decisions about redistribution. Basically, we hypothesize that if voters considered these factors, they would vote accordingly.

We analyzed support for such voting-right reforms through an empirical study in which we investigated whether framing of state redistribution dilemmas influences attitudes towards voting-right reforms. More explicitly, the main question was whether raising awareness about intergenerational dilemmas improves sensitivity to future generations' rights and interests.

Such survey-based experiments face two challenges. First, critics of attitude research and framing research often claim that attitude changes due to framing do not model opinion formulation processes in real discourses. They represent ad hoc, short-term effects and respondents adapt to perceived expectations with their responses. Second, the claim is that those respondents who do have their

opinions influenced by real discourses would not respond to the hypothesized stimuli in the predicted way, although the topics of the frames used in the experiments do affect them.

Both claims represent grave critiques of research that uses framing effects in experiments, but a method has been recently developed to respond to them. The former critiques build on two opposing models of ideal voters and psychological research has identified methods for determining with which model the personalities of respondents can be associated (Matthes 2007). One type of respondent has difficulty formulating opinions and uses easily accessible response patterns when facing non-trivial questions. In other contexts, however, they respond in a different way, without "carrying over" previous responses. Hence, the validity of their survey responses is quite low. These types of respondents are referred to as "memory-based information processors." The second type of respondent easily formulates opinions which are consistent with earlier responses, but which are modified and reevaluated based on new information. The opinions of the latter are changed by simple manipulations only with dificulty, yet their response validity is higher as they are likely to carry over their attitudes to real situations without framing effects. Results from framing experiments are stronger if they involve respondents of the second type.

Considering the above, we formulated our hypotheses. The first assumption was that the discourse about state redistribution focuses mainly on intragenerational dilemmas (the "Robin Hood" state). Thus, our first hypothesis was that, compared to the control group, an intragenerational frame should not have considerable effects (H1). Our second hypothesis was the motivating assumption of our research: we hypothesized that discussion of intergenerational redistribution dilemmas before surveying attitudes towards the aforementioned voting-right reforms would improve support for those reforms (H2). However, considering the multiple approaches to voter behavior we assumed that this effect would be different among generations: weak for the elderly, stronger for the middle-aged, and strongest among the youngest (H3).

An important component of the literature about redistribution preferences is the relationship between ethnic prejudice and welfare preferences. In the literature on intergenerational redistribution, however, this is a marginal topic despite the fact that the theoretical connection is quite strong. However, in the Hungarian policy discourse about voting rights reforms this topic was emphasized. Namely, it has been expressed that providing additional rights to large families would simply increase the political weight of the roma, hence such reform proposals would face serious resistance from prejudiced voter groups. For this reason, we also included the issue of roma and benefits in our experiment as well, wording it in a way that would not present the dilemma as redistribution between roma and non-roma.

Instead, our ethnic frame only very shallowly suggested a connection between large families in need and the roma. We assumed that the ethnic frame would also decrease support for voting-right reforms (H4).

DATA AND METHODS

The empirical study involved a survey using an online quota sample of 1000 respondents between the end of June and beginning of July 2016. The structure of the sample in terms of age, cohort, and regional distribution resembles the overall Hungarian population. However, given that the sample was conducted online, the proportion of uneducated respondents is lower than in the population overall, thus the raw responses are probably not representative of the population. However, our study does not focus on simple frequencies of responses (it was not designed to be similar to polls which precede referenda, or pre-surveys related to political decisions). Our sole purpose was to investigate the effects of the framing stimuli on responses to our questions (Schuman 2008). Recent results, especially from online surveys, show that the demographic differences between the sample and the population have negligible (or easily manageable) effects on such framing experiments (Mullinix et al. 2015; Weinberg, Freese, and McElhattan 2014).

Our study focuses on possible reforms of the voting-system. We posed three attitude-related questions in relation to topic, asking respondents their opinions about the following reform-related options:

1. For each child below the age of 18, a family should get an extra vote
2. In referenda that influence the future of the state, the votes of young voters should should be awarded more weight than those of the elderly
3. Similarly to in Austria, the voting age should be decreased to 16 years old

Respondents reported their level of their agreement using a four-item Likert-scale. The three responses were processed into a composite variable that located respondents on an opinion-dimension defined by the factor analysis of responses to individual questions. We assumed that this latent dimension would measure the strength of opinions about the principle of improving future generations' representation, separating this from specific aspects related to the survey questions. This factor score variable was our dependent variable and was present on the left side of our regression model.

Our experiment focuses on examining framing effects on political opinion. We created four random subgroups for the sample (250 respondents each; quotas were used regarding demographic properties on the total sample but not

on these sub-samples). Besides the control group one group was exposed to intergenerational and another one intragenerational frames during the survey, while the third group was exposed to a frame that was aimed at artificially creating associations between large families in poverty and the roma (we refer to this as 'ethnic treatment'). The respective frames were employed at the beginning of the survey for the inter- and intragenerational redistribution groups, while the 'ethnic treatment' involved priming questions throughout the survey as a treatment. Following exposure to the frames, respondents were asked to respond to various questions about public policy and politics.

The framing consisted of two steps. First, an information video was shown to respondents with related infographics and an explanation of the respective dilemmas.[7] The videos did not contain potential solutions, but only factual statements (numerical information), and exposed the dilemma of redistribution between old vs. young followed by rich vs. poor. The video was followed by a series of questions about attitudes towards redistribution, as outlined in the framing. Another set of questions then followed about redistribution in general, and only after these questions were the actual voting-right reform questions presented. In the ethnic treatment there was no informational video, and nor were respondents asked questions about redistribution from an inter/intragenerational perspective. Instead, this group answered a series of attitude questions about the poor and recipients of benefits, wherein stereotypical statements about roma and benefit recipients followed each other.

The information videos attempted to encourage respondents to think about the redistribution dilemmas presented therein, while the ethnic treatment was not specifically designed to provoke conscious association between the two factors.

RESULTS

As previously described, the respondents in our sample were asked three questions related to voting rights. The first one was about providing voting rights to parents, the second proposed increasing the weight of young generations in votes, while the third involved decreasing the voting age to 16 years following the example of Austria. Responses ranged from fully support to completely reject on a 4-level scale.

7 The video-vignette of the intragenerational redistribution frame is available here: https://www.youtube.com/watch?v=oVjMlSmcooI
The video-vignette of the intergenerational redistribution frame is available here: https://www.youtube.com/watch?v=vLIiqdDNycs

Respondents in general rejected each proposal. Giving additional voting rights to parents with underage children in the family was rejected by 62% of the control group (without framing), and only 17% of respondents agreed with this proposal to a smaller degree. Similarly, the proposal to increase the weight of younger generations' votes was rejected by 56% of the control group and only one in six respondents agreed with it to a lesser degree. For both questions, 6% supported the proposals completely. Decreasing the voting age was also rejected by the majority of respondents (38% completely against, 32% supported, and only 12% expressed full support). In the control group, 30% were strictly against each proposal. However, in our sample 43% of the respondents agreed at least to a small degree to at least one of the proposals.

These proportions may indicate current trends, yet the results should be handled with care, and not only because of the small sample size (the control group consisting of 250 respondents). Our online sample that was optimized for this survey experiment did not properly represent the adult population in some important respects. Most importantly, educated respondents were over-represented in our sample. Note that those with low level of education (who did not graduate from high school) are more supportive of these proposals than educated respondents.

As mentioned before, we used regression models to investigate the effect of framing on attitudes to maintaining the status-quo of intergenerational relations. The dependent variable in these regression models was a composite variable constructed by factor analysis of the three responses. The variable was standardized with higher values denoting "gerontocratic" preferences aimed at conserving the status quo, while low values express a preference for providing future generations and younger voters with more weight.

The first table contains three linear regression models which approximate the effect of experimental manipulations on preferences about voting rights based on the data from the sample. The first model compares the responses of the control group with the responses of the treatment groups (the simplest test of our second hypothesis, H2). The second model examines our hypotheses about the age-group dependent effects of age and framing (H1 and H3).

In our experiment, many respondents were excluded from the sample due to the limitations of their devices (cell phones, typically) and were substituted by others. The most interesting effect of this is the under-representation of young respondents in the groups with treatments involving information videos. But there were other less obvious differences due to the selection effects of the device on which the online survey was responded to. In order to control for such problems, we also estimated a model enriched with sociodemographic controls. We consider that this model best estimates the experimental effects, thus we focus on the results of it below – note that there are no differences between the second and the

third model with respect to the conclusions about experimental effects. The fit of the models shows that the explanatory power of the experimental treatments are quite low. The same holds for our model that includes an extended set of control variables (sex, education, income, residence, labor market status, household size, underage children, siblings, partisan and ideological position, faith).[8]

Table 1. *Support for voting-rights reforms (composite dependent variable). OLS regression estimations, full sample.*

	(1) Model 1	(2) Model 2	(3) Model 3
Experimental manipulation			
Intergenerational frame	0.129	0.136§	0.118§
	(0.149)	(0.271)	(0.326)
Intragenerational frame	0.0379	0.108§	0.0886§
	(0.672)	(0.374)	(0.457)
'Roma= poor large families' frame	0.0673	0.0852	0.0820
– middle-aged	(0.452)	(0.480)	(0.490)
Age group			
Young: 18-29 years		-0.123	0.0105
		(0.413)	(0.952)
Old: 60-x years		0.202	0.0700
		(0.212)	(0.706)
Interaction: experimental manipulation X age			
Intergenerational#Young		-0.464*	-0.442*
		(0.0700)	(0.0796)
Intergenerational #Old		-0.0218	-0.0542
		(0.918)	(0.793)
Intragenerational # Young		-0.254	-0.209
		(0.303)	(0.387)
Intragenerational # Old		-0.237	-0.238
		(0.266)	(0.255)
Poor Roma # Young		-0.126	-0.113
		(0.564)	(0.597)
Poor Roma # Old		-4.19e-05	0.0221
		(1.000)	(0.921)
Constants	-0.0586	-0.0687	-0.683*
	(0.355)	(0.424)	(0.0839)
N	1,000	1,000	1,000
R2	0.002	0.028	0.111
Controls	NO	NO	YES

p values in parentheses * p<0.1, § Effect size for middle-aged respondents

8 Based on our approximations, the statistical power of a sample size of 1000 is considerable. The model that includes the control variables in the table below would be able to reveal the effects of the intergenerational frame at 80% probability even if the model's explanatory power improved by 0,7% (R2). This is the explanatory power of this frame among younger respondents. An effect causing a 2% increase in R2 could be shown in such a sample with 99.5% probability – using the estimation methods in STATA; results can be found here: https://drive.google.com/file/d/0B-qpUqAOfZ1pb1FEc19NUHczeDA/view?usp=sharing

We analyzed the effect of the experimental manipulation separately for younger (18-29 years old), middle-aged (30-59 years old) and elderly (60+ years old) respondents. Estimations using these age groups indicate that mentioning stereotypes against roma and large families did not significantly influence attitudes towards the reforms. Those who were exposed to such stimuli did not support the status quo more than those in the control group. The effect size is comparable to that for political orientation (and not significant statistically).

The voting-rights preferences of respondents who participated in the intragenerational treatment did not differ significantly from the preferences of those in the control group. The opinions of younger and elderly respondents changed positively due to the treatment, but there were no changes in the case of middle-aged respondents. The influence of the intragenerational experimental manipulation was not significant in either group.

Our study focuses mainly on the effects of the treatment with the intergenerational frame. The middle-aged respondents in this group swung slightly towards rejecting the reforms, yet for the elderly the effect was barely noticeable (the effects and the difference between these two generations are not significant). Younger voters were significantly affected by the intergenerational frame, suggesting more support for their own interests and those of future generations, resulting in support for the voting rights reforms that were proposed. However, the effect is small as well, as shown in the third column of Table I (the parameter estimation of the interaction variable shows the effect of the frame in comparison with that for the middle-aged generation). The framing practically shifted the opinions of the younger respondents with a third of the standard deviation.

To sum up, we conclude that the treatments did not have considerable effects on the opinions of respondents, except for the younger ones whose opinions were affected by the intergenerational frame. Note though that we cannot accept responses to questions about such complex and abstract matters without skepticism. The paradigm of standard survey-based attitude-related research is often criticized by questioning the external validity of research into abstract issues that do not exist in everyday life. We rely on another type of critique that emphasizes that there are numerous differences between people when it comes to revealing their opinions and thinking about such complex questions (Bizer et al. 2006). Critics claim that a considerable fraction of respondents have difficulties formulating opinions about such matters. Their responses concerning such topics are rather ad-hoc and less consciously arrived at. Another fraction of people more consciously form their opinions and it is more difficult to artificially divert them using latent stimuli. Due to this conscious process of opinion formation they may react better to explicit information that requires rational reflection.

In our study we measured the ease of opinion formulation using a set of questions typically used for such purposes in the literature ("need to evaluate" scale [Bizer et al. 2004]) and then split our sample into two (as equally sized as possible). The first part consisted of less conscious respondents, while the second part contained those that had less difficulty with opinion-formulation. We then approximated the same regression models as above for these two subsamples individually, as shown in Table 2.

Table 2. *Support for voting-rights reforms (composite dependent variable). OLS regression estimations in subsamples based on respondent types*

VARIABLES	(1) M2 memo based	(2) M3 memo based	(3) M2 online proc.	(4) M3 online proc.
Experimental manipulation				
Intergenerational frame – middle-aged	0.304*	0.304*	-0.0596	-0.0978
	(0.0641)	(0.0599)	(0.751)	(0.599)
Intragenerational frame– middle-aged	0.0922	0.0753	0.115	0.107
	(0.588)	(0.653)	(0.491)	(0.528)
'Roma= poor large families' frame	0.281*	0.280*	-0.150	-0.126
– middle-aged	(0.0919)	(0.0933)	(0.383)	(0.458)
Age group				
Young: 18-29 years	-0.271	-0.0583	-0.0160	-0.0225
	(0.213)	(0.821)	(0.937)	(0.924)
Old: 60-x years	0.0730	-0.0117	0.203	0.165
	(0.773)	(0.967)	(0.326)	(0.504)
Interaction: experimental manipulationXage				
Intergenerational#Young	-0.202	-0.228	-0.909**	-0.747*
	(0.541)	(0.486)	(0.0360)	(0.0844)
Intergenerational #Old	-0.121	-0.185	0.103	0.0728
	(0.710)	(0.567)	(0.713)	(0.792)
Intragenerational # Young	0.0170	-0.0108	-0.507	-0.444
	(0.962)	(0.975)	(0.126)	(0.175)
Intragenerational # Old	0.127	0.0668	-0.483*	-0.441
	(0.701)	(0.838)	(0.0777)	(0.108)
Poor Roma # Young	-0.367	-0.449	0.178	0.202
	(0.240)	(0.146)	(0.551)	(0.493)
Poor Roma # Old	0.0260	-0.00229	0.0957	0.0696
	(0.939)	(0.995)	(0.743)	(0.807)
Constants	*-0.242***	*-1.150***	*0.135*	*0.181*
	(0.0451)	(0.0402)	(0.259)	(0.756)
N	520	520	480	480
R2	0.043	0.149	0.044	0.148
Controls	*NO*	*YES*	*NO*	*YES*

p values in parentheses ** p<0.05, * p<0.1

Data show that more conscious respondents were – according to our expectations – more positively affected by the intergenerational frame. Similarly to previous results, the elderly did not react to the frame, and the middle-aged only reacted to a very small degree (not significant statistically) in terms of

support for voting-rights reforms. Among younger respondents this change is not only statistically significant, but its extent is also approximately one standard deviation for the composite variable that describes support for voting-rights reforms. Also, these results are robust for changes in the age groups: the positive effect is observed even when the upper age boundary of the younger age group is increased from 29 years to 34 years.

Investigation of the effects of experimental manipulations in the cases of the different voting-rights reform proposals is also interesting (note that a composite dependent variable was analyzed above). For the reasons outlined above, we only demonstrate regression results for more conscious respondents. The first question concerned voting reform in the shape of giving extra voting rights to parents for their children. Results are very similar to those obtained in the case of the composite variable. Elderly respondents are unaffected by the intergenerational redistribution frame, while it slightly increases support for reforms in the case of the middle-aged and has a significant positive effect for young respondents. Similarly, the intragenerational frame has a positive effect on support of this reform, yet to a much lesser extent.

The second reform addressed the weight of the votes of younger voters. This proposal directly separates the interests of future generations and current generations and creates the biggest contrast between them. Perhaps this was the reason that numerous respondents refrained from responding to support the self-interest of their own generation. Nevertheless, the effect of age on opinions was not stronger than in the case of the previous question, and the intergenerational frame had smaller effects on younger and middle-aged respondents. The effect of the intragenerational frame was smaller compared to the previous question as well (however, this question apparently had a different effect on the middle-aged compared to the elderly and young respondents; this contrast resulted in significant regression parameters).

The third, much less radical form of reform (only marginally related to intergenerational justice) concerned lowering the age of voting. It is not surprising that we did not experience any effect of either frame among the most conscious respondents.

SUMMARY AND CONCLUSIONS

In our study we investigated the effect of extending voting rights to future generations. From a moral point of view, we may be correct to doubt the wisdom of directly providing voting rights to children (due to their lack of decision-

making capabilities given their age and maturity), or giving their parents extra voting rights (as parents may abuse this right to pursue their own self-interests). Despite this, it is clear that while some pillars of the representation of future generations are already defined, these have no influence whatsoever on the course of democratic elections. These pillars include representation in the case of environmental questions (institutions or constitutional barriers), legal representation, and the revisions of some governmental decisions by professional bodies and committees representing future generations (such as monetary councils). Even in these cases the focus is not on giving the choice to future generations, but on influencing issues that could have long-term effects on future generations.

In our empirical study we investigated support for reform proposals that would improve the intergenerational justice of the voting system using an online survey, where we framed this topic in different ways. Our main question concerned the voting rights of children, and we inquired about support for three reform proposals: giving extra voting rights to children (and delegating that vote to parents); changing the weight of the votes of younger voters; and decreasing the voting age.

The first proposal does not involve the explicit participation of future generations in voting, but rather delegates voting rights to parents or other representative institutions. This raises numerous practical questions, but these are outside the scope of our current work. The second proposal would not include children among voters, but would increase the weight of the vote of younger voters to counter the asymmetry due to current negative demographic trends. The third proposal was to include a small proportion of future generations in voting by decreasing the voting age. Attitudes towards these reforms were surveyed using differently framed surveys: one frame emphasized the intergenerational aspects of the welfare system, another frame introduced the intragenerational redistribution dilemma (poor vs. rich), while the third promoted an ethnic focus as well (roma and large families in relief) – here we used a priming technique instead of framing for the survey. Naturally, there was one unframed version of the survey to provide us with a control group.

Results indicate that these proposals are unpopular, irrespective of framing. We found that the interests of future generations were less important to the elderly – however, it is vital to emphasize that these issues are not generally present in public discourse. The purpose of our framing was not to provide information about the topic, but to present various redistribution dilemmas.

Despite our expectations, framing did not significantly change responses, and nor could we identify significant relationships between support for the proposed reforms and some sociodemographic variables. This situation was not improved

extensively, even by controlling for strong-opinion-formulating voters (the only exception to this were more conscious young respondents). Another surprising result was that ethnic priming did not influence responses either. One may conclude that the problem of representing future generations in the democratic voting system – either directly, or by delegating votes – is so removed from everyday issues that a typical survey respondent may not be able respond in a meaningful way.

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FERTILITY MYTHS, TECHNOLOGY MYTHS AND THEIR SOURCES – LAY REASONING ABOUT AGE-RELATED FERTILITY DECLINE

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ABSTRACT *In many societies the average age for giving birth is rising. One factor which could contribute to the timing of childbirth – which has not been explored to a sufficient degree with qualitative research – is lay understanding of fertility and the possibilities offered by reproductive technology. Twelve focus groups were used to examine the reasoning of female university students in Hungary about age-related fertility decline, how they thought reproductive technologies could help, and how they drew on information sources. Although in many groups the existence of age-related fertility decline was acknowledged, fertility and technology myths – namely, overly positive misbeliefs – surfaced repeatedly. Building on some elements of the contextual model of Science and Technology Studies, I discuss how social-psychological phenomena such as resistance to the idea of personal risk can be important in lay interpretations of age-related fertility decline, as well as how exemplification processes can contribute to these myths.*
KEYWORDS: *fertility decline, reproductive technologies, lay reasoning*

INTRODUCTION

In many societies a shift to later childbearing can be observed (Soini et al. 2006, Sobotka 2017). Delayed parenthood is especially a problem of developed societies (OECD 2016), and postponement of first births is a prominent

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characteristic of the fertility patterns of these societies (Sobotka 2004). Infertility specialists have argued based on research that delayed childbearing is related to higher rates of infertility and carries with it higher maternal and fetal risks. Besides the effects of age itself on fertility, the chance that women will suffer from illnesses or conditions that can cause infertility also increase with age (ACOG Committee on Gynecologic Practice – Practice Committee of ASRM 2014).

Moreover, although technological options can help to a degree with age-related fertility issues, technological help has its limits and cannot completely counterbalance the drop in fertility (Leridon 2004). In-vitro-fertilization (IVF) is expensive and success rates for the technique when using the woman's own eggs decline with age. According to US national data from 2014, whilst the chance of achieving a live birth in a single IVF cycle were around thirty-seven percent in women under thirty-five years old, this dropped to five percent in women aged forty-three, two percent for women aged forty-four, and were only one percent for women older than forty-four years (using fresh, non-donor eggs). In contrast, when eggs from young and healthy donors were used, the success rate with live births was very similar for the different recipient age groups. This shows the importance of the decline in the quality of eggs in age-related infertility and that the age of eggs affects the chance of becoming pregnant (CDC, ASRM – SART 2016). However, while IVF can enable pregnancy even past menopause with the help of donor eggs and for some this seems to be a miracle solution, many couples reject this option (Friese et al. 2006). Another form of technological help is social/elective egg freezing: when a woman's eggs are frozen for later use. The limitations of this procedure include its high cost, the fact that the practice is not allowed in some countries, and that for the highest probability of live birth, eggs must be frozen before the woman reaches the age of thirty-four (Baldwin et al. 2014, Mesen et al. 2015). Thus, this technique does not represent a miracle solution either, but only an option that can enhance the chance of becoming pregnant. It is also relevant that for women to use this procedure they should have knowledge of its benefits, understand that fertility declines with age, and acknowledge that this might also happen to them. Egg freezing with a reasonable survival rate is also a recent technological development, and the experimental label on the new technique of cryopreservation has only recently been removed by some medical bodies (ASRM – SART 2013), so that many women who are currently undertaking IVF have not had the opportunity to have their eggs banked.

Fertility postponement has the consequence that many couples will be faced with having fewer children than they intended, while some may even remain childless (Mills et al. 2011). On the individual level, research has demonstrated

that childlessness carries with it a swathe of negative psychological burdens (Hansen et al. 2009). Additionally, fertility postponement can contribute to lessening the total fertility rate in an era when in many European societies the latter has already fallen below replacement level (Miettinen – Szalma 2014).

Delayed parenthood is considered to be a result of fundamental social, economic and cultural transformation. A large number of factors have been identified as contributing to the shift towards delayed parenthood, such as higher educational attainment, greater female labor force participation and increased investment in career development, difficulties in reconciling work with motherhood, the uncertainties surrounding employment, widespread use of contraceptive devices such as the pill, greater emphasis on self-actualization, the growing demand for leisure, and changes in partnership patterns and social norms regarding parenthood (Sobotka 2004, Mills et al. 2011).

Szewczuk (2012) emphasizes that from a sociological perspective fertility postponement can be looked upon as a social practice. On the macro level this social practice influences demographic structures, whilst on the micro level it "it shapes and structures female bodies and experience" (Szewczuk 2012: 429). Reproductive norms have changed to such a degree compared to earlier times that in the early part of the female adult life course childlessness can be regarded as a normative stage for many segments of the population, whilst in the later stages fertility is the reproductive norm. This childless stage during the life course of women enables them to have a career and access other opportunities, whilst at the same time contributing to fertility risks because of the age-related fertility decline. Szewczuk argues that on the micro level modern contraceptive methods mean that many women have the illusory notion of reproductive control. Contraceptive pills signal to women that technology can be trusted and can help them with their reproductive goals, and that reproduction can be clearly planned and birthing put off, giving a feeling of reproductive control, whilst at the same time being so user-friendly that women do not have to think about these choices too much. This can result in fertility issues being "put on the back burner" (Szewczuk 2012: 429); i.e. not being thought about nor talked about during the time of postponement, but then contributing to age-related challenges with childbirth.

In recent years a number of studies have drawn attention to the understanding of biology and reproductive technology as factors which also might influence the timing of childbirth. There are some indications that a knowledge deficit could potentially play a part in decisions about timing, although as a new research topic these issues have mainly been investigated retrospectively, or involved the examination of plans for the timing of childbirth, not actual registered births (Mac Dougall et al. 2013, Stern et al. 2013, Wojcieszek – Thompson 2013).

These results suggest that, for some women, having a better understanding of related issues might change their life strategies, thus making the study of these beliefs a relevant goal. However, so far these beliefs have been studied mainly using questionnaires while only a few qualitative research projects have taken understanding of age-related fertility decline as their central focus of investigation, which is the goal of the current study. Research is especially scarce about how people draw on different information sources in their reasoning. With the trend of fertility postponement likely to continue (Soini et al. 2006), there is a critical need to study these issues in more depth.

The questions that guided the research this paper is based on were as follows:

1. How do Hungarian female university students make sense of the relationship between age and fertility in group discussions?
2. How do they see the role of technology in terms of being able to help with age-related fertility problems?
3. What information sources are the respondents drawing upon, and how, when making sense of age, fertility decline, and reproductive technologies?
4. Do the social-psychological factors associated with the contextual model of science/health communication appear in their reasoning, and if yes, how?

Although some research has touched upon how age-related fertility is regarded by members of the lay public, there is still a striking lack of sufficient and intensive exploration of this topic. A range of quantitative research projects have been conducted in recent years which included some questions related to these issues (Bretherick et al. 2010, Bunting et al. 2013, Conceição et al. 2017, Daniluk – Koert 2015, Daniluk et al. 2012, Hashiloni-Dolev et al. 2011, Hewlett 2002, Gossett et al. 2013, Lampic et al. 2006, Maheshwari et al. 2008, Maeda et al. 2016, Peterson et al. 2012). However, there are limitations on the evidence base of these studies. Most involved small samples and, even in case of bigger samples, many were non-representative. Moreover, some of the research focused more on fertility awareness in general than age-related issues.

More importantly, there is a dearth of international qualitative research which has investigated the topic of this article comprehensively and in-depth as its main focus. Accordingly, there is a need for more qualitative research that yields in-depth information about the sense-making process itself, and about how research subjects build their arguments, rather than simply offering a static view (Kotchetkova et al. 2008). Previous qualitative studies that have touched upon some of the issues involved in the current research mainly either investigated broader themes of which the present focus was just one of the sub-topics (e.g. Cooke et al. 2012, Hewlett 2002, Jarrett – Lethbridge 1994), or concentrated on special populations of women who discussed these issues retrospectively

after having become pregnant with the assistance of reproductive technologies (e.g. women who became pregnant with the help of IVF after the age of 40 [Mac Dougall et al. 2013], or couples who had conceived with the help of donor oocytes – [Friese et al. 2006]) or women who had previously used contraceptive pills who had turned to IVF unsuccessfully after the age of 35 (Szuwczek 2012).

Almost all previous research took place in leading high-resource countries, so less is known about the situation in other regions. Previous research in Hungary with childless women gave some indication that there might be knowledge problems with fertility issues (Szalma-Takács 2014, Szalma-Takács 2015), and the results of a representative survey show that attitudes toward artificial insemination are positive (Szalma 2014) – however, no previous sociological research has been conducted in Hungary that focused on the topic of age-related infertility.

However, in spite of the differences in method, focus, sample and society where these earlier research projects were conducted, some similar conclusions can be deduced from them in connection with the current topic. Such studies suggest that there can be knowledge gaps and misperceptions amongst women or members of the public in general with respect to age-related fertility issues – typically involving overestimations of the probability of getting pregnant at certain ages. Studies have also found that success rates of IVF, and IVF for specific age groups, are repeatedly overestimated.

In the present article I use the term "*fertility myths*" to refer to these overly positive assessments of fertility-related challenges and to the arguments and beliefs linked to them. Fertility myths are connected to falsely positive evaluations that overestimate the probability of successful pregnancy for certain age groups and to evaluations that downplay the role of age in fertility. In this paper I use the term *technology myth* to denote such overly positive evaluations of potential technological success (mainly IVF with own eggs) regarding cases of failure to conceive naturally, and more concretely, with age-related infertility. As I have argued, the above-mentioned international research has often identified the existence of such fertility and technology myths (as defined above) amongst research subjects.

There are also some indications from the former empirical research base that a greater knowledge deficit among young people such as university students may exist compared to the somewhat older demographic group that still has the possibility of childbearing (Maeda et al. 2016). Bretheric and co-authors (2010) found that although members of their Canadian student sample were mostly aware that fertility decreased with age, they significantly overestimated the probability of successful pregnancy in each age group, and were not aware of how sharply fertility decreases with age. In the case of 169 British university

students, a lack of knowledge and misconceptions were mainly related to ideas about increasing fertility (for example, through healthy lifestyles) (Bunting et al. 2013). Hashaloni-Dolev and his co-authors (2011) came to the conclusion based on an Israeli student sample that students particularly overestimated the chance of genetic maternity for women of over 35 and also 45 years old. Only 11 percent of the student sample knew that genetic motherhood is unlikely to occur after a woman reaches her mid-forties, unless she has had her eggs frozen previously.

THE HUNGARIAN CONTEXT

Similarly to other Central and Eastern European (CEE) countries, Hungary is characterized by a low level of total fertility (Basten et al. 2013). The low number of births can be attributed to several factors, of which infertility problems among the population is only one (Kapitány 2012). Delays in parenthood can contribute the fertility decline of societies. Similarly to some CEE countries, especially the Czech Republic, Estonia, the eastern part of Germany and Slovenia, in Hungary a very rapid shift towards later motherhood occurred at the end of the twentieth century and the beginning of the twenty-first (Basten et al. 2013). The tempo of fertility postponement has slowed somewhat in the past few years (Kapitány – Spéder 2015). The proportion of women who have their first child at above the age of 35 or 40 was much higher in 2011 than two decades earlier (Kamarás – 2012). Around a third of women born in 1980 had not had a child by the age of 35 (KSH, 2016). As voluntary childlessness is extremely rare in Hungary (Miettinen – Szalma 2014), this suggests that the data cannot explained by a desire to remain childless, and that some women might have a hard time fulfilling their parenthood plans, especially as in the great majority of cases Hungarians still want two or more children (Spéder 2014).

Another relevant factor is that the average age of first-time mothers is connected to educational attainment (KSH, 2016). This puts women who have completed higher education at greater risk of age-related infertility problems and failing to fulfill their motherhood plans and makes questioning university students especially relevant. Previous studies have found that childlessness is more likely to occur among those with tertiary degree (Szalma – Takács 2012).

Legal regulations permit IVF in Hungary, both with non-donor and donor eggs, although in the latter case who can be a donor is very strictly regulated. Surrogacy is not allowed, and at the time of writing this article elective egg freezing was not permitted, although a debate had started about its possible inclusion among the other fertility treatments that are available (Sándor et al.

2017). It is currently estimated that approximately 1.5–2.5 percent of all children born in Hungary were conceived with the help of IVF technology (HCOG 2012). State funding is available for five IVF cycles if certain criteria are met, although patients still incur some costs, especially if they want to make use of better quality medicine, which creates difficulties for some patients (Bauer 2014a, 2014b). Economic and demographic factors as well as cultural norms have been shown to be correlated to the extent assisted reproductive technologies are used within European societies (Präg – Mills 2017a). In comparison to other European countries, use of these technologies is quite low in Hungary (Präg – Mills 2017b).

LAY UNDERSTANDING OF SCIENCE/HEALTH ISSUES

Several models deal with lay theorizing in connection with health and science topics and the differences between lay views and expert opinions. This study draws on what have been termed by Lewenstein (2003: 3) the "contextual approaches" of science and technology studies involving science communication, which claim that "individuals do not simply respond as empty containers to information, but rather process information according to social and psychological schemas that have been shaped by their previous experiences, cultural context, and personal circumstances." Research has demonstrated that there are many contextual factors which can influence how information about health topics are received, including social psychological phenomena, the characteristics of the individual, the health literacy of the audience segment, society, and other cultural factors (Gallagher – Updegraff 2012, Hastall et al. 2013, Sorensen et al. 2007, Kreps – Thornton 1992, Kreuter – McClure 2004, Takács 2016, Hinnant – Len-Ríos 2009). From all these factors, the current study focuses on social-psychological factors. It has been repeatedly argued that, as health communication involves information which can be personally troubling (for example, information about the potentially negative risks that a person may face), psychological phenomena can include avoidance and denial in processing this information (Gallagher – Updegraff, 2012), as well as fear (Maeda et al. 2016). Instead of relying on one theory, this study takes a broader explorative approach to see whether and how social-psychological processes play a role in lay interpretation.

In the study I apply a media effects perspective which assumes that audience members actively construct their views. Building on the effects-in-use approach of Gamson (1992), I treat media content as one conversational tool that people

can use in their discussions. This media-effects lens permits the study of this phenomenon and investigation of how media content is used as a conversational tool in practice – for example, how information or arguments that surface in the media appear in conversations. Use of this tool is treated as a media effect. Besides media, other conversational resources may also be employed, such as personal experience, or talking with other people, etc.

METHODS

Twelve focus groups were held in the course of the research between October 2015 and April 2016. The sample consisted of 71 female university students aged between 19 and 25, studying at diverse universities in Budapest, the capital of Hungary. Some students were majoring in humanities, and others in social sciences or natural sciences. Focus groups were heterogeneous internally with respect to the majors and to the universities the students were studying at. One criterion for selection was that students could not be majoring in biology or medical science as in this case they might have greater knowledge pertaining to the research subjects than others. MA/MSc students took part in four of the groups, in five groups only BA/BSc students participated, and in three groups participants were mixed in terms of type of degree. An incentive in the form of a small payment was provided to encourage participation.

The research design was approved by the relevant research ethics committee on 4 March, 2014. Research subjects gave their informed consent to taking part in the study.

The guide consisted of three main parts. In the first half of the first section, participants were asked about how they see the relationship between age and fertility. Then questions were asked in connection with how respondents assess the role of reproductive technologies in helping with age-related fertility problems. In the second part, participants were asked their opinions about the different reproductive technologies and whether they would think about utilizing these technologies themselves. In this part, questions were initially asked based on participants current knowledge, and then they were given some information about the technologies. Finally, in the third part group members were questioned about their information sources regarding the topic. In the current analysis I draw mainly on answers given to the first and third parts of the guide. Focus groups lasted approximately 80 minutes on average.

The focus group discussions were transcribed and transcripts were imported to the qualitative data analysis software NVivo and analyzed using qualitative

thematic analysis mainly following the criteria of Braun – Clarke (2006). The dynamic nature of the lay reasoning in the focus groups and the sense-making of the issues as a process was also under scrutiny in the analysis. Names in quotes are not translations of the speakers' Hungarian names but have been changed in order to protect anonymity. Some of the quotes consist of a single contribution from a group, while others are chunks of conversations, as shown by quotation marks.

In interpreting the focus group results, it is relevant to remember that because of the group situation certain social-psychological phenomena can influence outcomes. For example, there may be pressure not to deviate from group norms (Stewart et al. 2007). Participants were encouraged to voice their answers even if they felt unsure or if their answer was that they did not know. Still, it may be the case that those who were more uncertain of their answers allowed those who seemed to be more knowledgeable about the topic to dominate, or were influenced by them (Vicsek 2007).

RESULTS

Lay reasoning about age-related fertility decline

Asked about the relationship between age and fertility, in some groups the discussion started with the acknowledgement that there is a relationship.

"Emma: I think yes, they're connected. The later you have a child, the harder it is to get pregnant and the less healthy the child will be. And the more difficult the birth will be."

In other groups, the sense-making process involved group members instantly starting to talk about other factors that, according to them, influenced infertility – a strategy that seemed to rhetorically lessen the emphasis on age. It was often openly argued that these other factors – stress, mental and psychological health, lifestyle, physical fitness, earlier experience with abortion, genetic variables and illnesses, etc. – count much more than age. Besides genetic variables, other factors mentioned in connection with fertility were mainly things that these young women felt that they themselves could control, or that did not characterize them (for example, they defined themselves as healthy in contrast to ill people who typically had infertility problems). The argument recurrently arose that if a person were psychologically well and fit, did sports, and ate healthy foods then the fertility decline would be less, or might even be entirely avoidable.

"Kate: If you're healthy, exercise, keep your body young, in my opinion you have a chance of eliminating these age-related things."

"Jane: It's more to do with genetics than age: it's harder for some women to get pregnant and easier for others, that's why some succeed right away at 40, while others enter test-tube baby programs, because it also depends on the state of health, whether they had a more serious illness, an inflammation of the ovaries, things like that, so it doesn't necessarily depend on age, there are a lot of other things too."

For a few people, the role of psychological factors was believed to be so prominent that they claimed not to believe in the existence of biological reasons for infertility. Although in some cases arguments were made about the interaction of psychological factors and age (i.e. the idea that in older age one may be too stressed to have a baby, and that one may accumulate more stress during years at a workplace), at other times psychological factors were discussed irrespective of age, again diminishing the importance of the latter.

Many focus group participants mentioned later in the discussions that there was some relationship between age and fertility. However, in some cases when this relationship was acknowledged there was a preference for emphasizing how very context-dependent this relationship was; that it was not a strong relationship, that some people could easily get pregnant even in advanced age, or even that this rule did not apply to everyone. There were also some instances when the stronger endorsement of a fertility myth occurred: participants argued that age was not necessarily a factor that made getting pregnant more difficult.

"Clara: I think it is related at some level too, that older women are said to be not so fertile, but we know of cases of women becoming mothers at forty or fifty. So it depends on the individual too."

"Jessica: I think so too, obviously age has something to do with it, the chances are lower, but as others have already said, that doesn't apply to everyone, it depends on the individual, for instance on their state of mind."

The age 35 surfaced repeatedly in the groups. When asked about the start of the fertility decline, this age was most frequently mentioned. However, the age of 35 was mainly associated with an increased risk of health problems for the fetus and the baby. Even if the question pertained to age and the difficulty of getting pregnant, answers often focused on illnesses which are typically an issue *after* a woman becomes pregnant. In some of the groups it was argued that the idea of an increase in difficulties at age 35 is just a stereotype or refers to a statistic, or applied in earlier times but is now no longer relevant as medical technology has progressed, or that mention of this number is just scare-mongering – but what really mattered was individual-level factors, or that with a positive outlook women could influence this factor.

Different views were voiced in answer to a question about the ease of getting pregnant when 40-45 years old. Some research subjects emphasized the difficulty of getting pregnant after 40, whilst in other answers a fertility myth regarding this age group arose: the claim was that it is not so much more difficult to become pregnant at this age than at a young age. It was again argued that fertility success was a very personal issue. Some of these statements were supported with examples of acquaintances or media stories about women who had become pregnant when over 40 years of age (more on this later). Some participants noted the trend for more pregnancies for women in their forties, with motherhood being delayed, and this trend was seen to support the possibility of fertility at that age.

"Moderator: In your opinion, how easy is it to get pregnant at forty or forty-five?

Clara: I think it's not as easy as earlier... But it can still happen.

Jennifer: That depends too. Because it's more difficult on average, but some women can very, very easily get pregnant at any time really."

"Moderator: And if someone wants to get pregnant at the age of 40–45, how easy or difficult do you think it is?

Ann: It depends on the genetic makeup. I don't think you can tell in advance."

The chance of motherhood after age 45, and even cases of women bearing children at the age of 60 and 65 years old were mentioned, not as a high probability, but the possibility was thought to exist – although in a few cases there was some confusion over how a woman could be pregnant at such an age. These discussions took place before the moderator brought in the topic of technology, but it was notable that the involvement of technology was often not mentioned by participants.

"Eve: There are always cases like that. Last year a 65-year-old woman got pregnant."

A fertility myth about advanced maternal age was in a few cases supported by a resistant attitude. Some participants talked about having feelings of resistance as reaction to the pressure they felt from society, the government, family members and relatives regarding women and the timing of childbirth and the number of children they should have. This pressure was thought to have a social origin. It was perceived that the incumbent conservative government views the primary role of women as mothers, or wants women to have multiple children to halt the decline in the population of Hungary. Group members expressed the view that parents and older relatives were exerting pressure as they had not yet accepted that motherhood was being delayed by many women. When arguments were formulated around the notion that women are pressured to have children, the biological cause of age-related fertility issues was left out of the picture. Many

participants felt that the message of the government was overly conservative with respect to women and rejected it. Because of this, some claimed to be skeptical and did not believe information about age-related fertility difficulties:

"Megan: But what I don't like about this is that there seems to be strong social pressure on you to have a child now, which starts long before there would be any biological difficulty. I have a feeling about the 40-year age limit, it's not at all certain that it becomes difficult from the age of 40, it's just society thinking that here is a person who still doesn't have a child when she really should."

The mechanisms underlying the decline in fertility were not known by many, or such knowledge was not easily accessed. When the moderator asked what participants thought explained the decline in fertility with age, some participants remained quiet, said they didn't know, or did not give an answer. Others gave answers involving the condition of the uterus, the aging of the female body leading to less regeneration, more stress in older age, and the accumulation of lifestyle impacts. In a few cases changes in levels of hormones were mentioned.

Only in half of the groups was the decline in the number of eggs mentioned, and then often not emphatically and commonly very uncertainly, whilst the fact that the quality of eggs declines hardly arose in group discussions at all.

"Dora: Yes, I've heard about something like that, I don't know exactly, that after a certain age there are fewer eggs or something, I'm not good at biology."

Lay reasoning and the role of technology

IVF with or without sperm donation, medical/hormone treatment, and surrogacy were mentioned most often as reproductive technologies in the groups. Insemination, elective egg freezing and IVF with donor eggs were less well known, with most participants not having heard about them or not knowing what they entailed. Egg freezing was somewhat more familiar to some of the respondents than IVF with donor eggs or insemination. However, even to the former it was often not completely clear for whom elective egg freezing was intended, and how it works. In none of the groups was it mentioned that one way to help older women with infertility issues would be to have IVF using the donor eggs of a young woman. It is notable that while IVF with donor eggs is allowed in Hungary, the process was basically unknown by participants – whilst the issue of surrogacy, which is not legal, arose many times in the discussions. During the process of trying to make sense of what IVF using donor eggs might involve (in response to the moderator's questions about it), it was often confused with surrogacy.

Technology myths were abundant, along with optimism regarding the ability of technology to help with infertility problems in general, and more concretely, with age-related fertility decline. Even before the topic of technology entered the discussion (through the moderator), the potential assistance of technology was brought up spontaneously in some groups as a means of achieving pregnancy in advanced maternal age. The current use of IVF (without egg freezing in younger age) was seen as helping in this regard.

During questioning about technology, most of the female university students emphasized how technology and medical science are constantly developing and offering help with motherhood in advanced age:

"Rebecca: "I think there must be a difference in success with the test-tube baby procedure with age, but perhaps the difference isn't so big, I don't know, but obviously it is more difficult for an older women to get pregnant, say over 40, and easier for someone aged 20. But in my opinion, if IVF is used and they try, I think the difference is much less [compared to the case when no technology is used]."

"Moderator: Do you think that the development of medical methods can help with solving the infertility problems that arise with age?

Angie: I think they can help a lot now. At 25 I'm not at all clear about things, I only know that this possibility exists and it can be quite useful if you are in need of it."

Some university students even argued that these technologies make pregnancy currently possible for age groups that would not be able to conceive naturally.

"Susan: I think it's very hard (to get pregnant at such a late age). I can't imagine how it's possible the natural way. I think it can only be done with IVF and close monitoring of the pregnancy.

"Moderator: What do you think influences the success of the IVF procedure? Can it be influenced by age?

Ellen: Not so much in my opinion, I have a feeling that if someone doesn't succeed in getting pregnant because of age or for any other reason, it acts as a substitute for that phase. I have a feeling that it eliminates these possibilities."

Group participants were also asked what they thought the age limits for successful IVF treatments with their own eggs were. There were differences in the groups with respect to their answers, but a significant number of participants again succumbed to the technological myth that this limit is approximately 50 years or older, and were very surprised when informed that after 43 years of age the success rates for IVF with a woman's own eggs (unless eggs have been frozen earlier) drop to a few percent (CDC et al. 2016).

Given that many of the participants did not know about the age limits of IVF with a woman's own eggs, and did not know about elective egg freezing or

what it is intended for, nor about IVF with donor eggs, this means that when they expressed positive views about how technology could help with age-related infertility they were mainly thinking that IVF with the woman's own eggs was possible at these advanced ages without prior egg banking. In none of the groups was it mentioned in reference to cases of women becoming mothers at above 45–50 years of age (or even in cases of women 60–65 years old) that this must have involved IVF using donor eggs.

Whilst most participants expressed positive views about the high success rates of IVF, some participants were less optimistic about technology regarding how well it could help with infertility problems, and some emphasized that these technologies can help to a lesser degree when women are older. Another argument against the usefulness of technology was that it was expensive, so not everyone had access to it.

The use of information sources in the interpretation process

Media as a conversational resource

During the discussions, reference was made to the media: mainly to "soft" news stories centering on the lives of famous or non-famous individuals, or fictitious stories containing example cases. All of the examples involved cases with positive outcomes such as success stories about motherhood in general, or specifically involving motherhood at an advanced age.

Those who endorsed the fertility myths about advanced-age motherhood often relied on positive examples from the media in their reasoning. A popular reference point was the media story of a sixty-year-old mother; otherwise the references mainly pertained to celebrities giving birth at an advanced age. Based on these media stories of advanced maternal age, generalizations were sometimes made and it was argued that the relationship between age and fertility was very context-dependent, or at least that it was possible to get pregnant at these (advanced) ages.

"Jennifer: I read somewhere about a woman who got pregnant at the age of sixty, when in theory that can't happen ... in short, the level of fertility depends very much on the individual..."

From all the twelve focus group discussions, there was only one reference to a general article containing not a concrete case but a discussion about the relationship of age and fertility. It is notable that the female university student who mentioned reading this article later went on to talk of a media story about

a woman becoming a mother at the age of 60 without problematizing the issue of how this was possible.

"Moderator: What do you think: is there a connection between age and how easily a woman becomes pregnant and gives birth?"

Lily: Yes... Just last week I read an article about how a woman's eggs and the chance of becoming pregnant decline with age and are much less at over 30 or over 35... Obviously, there are women who give birth at the age of 60."

Generalizing using individual media cases also occurred to support the argument that psychological factors matter – and that, to an extent, these can diminish the effect of age. One case that was reiterated involved a Hungarian media celebrity giving birth naturally after having a child with IVF, and another involved Charlotte from the Sex and the City series who gave birth to a baby after adopting a child.

Examples of success stories from the media were also brought up regarding technologies, and sometimes an explicit link was made between these and conclusions about the positive role of IVF in helping with infertility:

"Kate: The last time I read about that was when Nóra Ördög had a child using IVF. It took a long time, but in the end she had a child. If I think about the question from this angle, it's a really good possibility."

IVF with sperm donation was mentioned based on examples from fictional films, while IVF and surrogacy were brought up repeatedly based on cases of celebrities using them, or fictional stories or films. When the outcome of the procedures in these examples was referred to in the discussions it was always positive. No media case was mentioned when the would-be mother used IVF with donor eggs. A surrogacy case which captured the attention of a few of the respondents involved a mother having her daughter's child to help with her daughter's infertility. This example was actually brought up to support arguments about how technologies can work even with older women. Thus, surrogacy was perceived by the participants to be present in the media as a topic which they knew about, although they did not recall having heard of IVF with donor eggs from the media, and consequently hardly anyone knew about its existence.

Although many of the participants said that for them the message of the media regarding technologies was that they could help, for a few interviewees the media image of success stories was not interpreted to mean that such technologies were available to everyone, but rather that it showed that having money and being a celebrity gave one opportunities that ordinary people did not have.

"Moderator: And what do you think is the message the media sends about the role and importance of technology?

Sandra: Stars can do anything.

Lily: That they can afford it."

In one of the groups the opinion arose that success stories in the media make individuals believe things that they would like to be true (such as women being able to get pregnant at whatever age they want). Thus, the strength of believing in fertility myths for some women might lie in the fact that they are preferable to engaging with reality, and they alleviate worry.

"Lidia: This picture may even show what we would like to see. That we would like to believe that it's not too late for us, that we can succeed at any time, and really, the media often shows what you would like to see, not necessarily what is correct."

Information from acquaintances and family members as a conversational resource

Besides the media, another form of reference that appeared repeatedly in the reasoning of the participants was examples of the experiences of family members or acquaintances.

Hasty generalizations based on the experiences of acquaintances were mainly in line with the fertility myth about advanced maternal age. In several groups, cases of acquaintances getting pregnant after the age of 40 were brought up to support arguments about how easy it is to get pregnant at this age. In these instances involving the logical fallacy of hasty generalization, the line of argumentation was that as the person in the example had been successful, being able to get pregnant was not so strongly related to age. Such generalizations were often made using a single case. Accordingly, logical fallacies were demonstrated by the group members regarding understanding of the relationship between two factors: even one successful case was used to illustrate the argument that one cannot establish the fact that aging decreases fertility.

"Moderator: And in your opinion, how easy is it to get pregnant at around 40 or 45?

Dora: I have an acquaintance who is 44 and had a child last year, but it wasn't difficult for her to get pregnant and she wanted a child. So perhaps this is not so much linked to age."

"Moderator: Then how closely are the two linked? How easy or difficult is it to get pregnant at a certain age?"

Sarah: I just recently met a woman who had twins with no problem at the age of 40, and there was nothing at all, no complications at all, so we can't say that in general age makes this more difficult..."

However, a few other cases were brought up, such as that of a woman who had had more difficulty getting pregnant in older age than when she was younger, to

support the hypothesis of an age-related fertility decline. These cases involved closer family members, whereas successful cases were mentioned in reference to a wide array of acquaintances.

Some participants knew people that take part in IVF. Arguments for the great success of technological assistance were also presented, sometimes based on these cases. Sometimes a hasty generalization was made: respondents argued that as the medical process had worked for their acquaintances, they thought that such techniques in general could help and were quite successful. Such generalizations were often made using a single case. Some participants expressed less optimistic opinions about how well technology could help with infertility problems. These respondents often supported their statements with reference to the experiences of people they know – mainly relatives. Again, hasty generalization about the utility of such technology was often based on the example of just one person.

"Clara: But I think it is difficult (for technologies to help), because my godmother is struggling with this problem, and they haven't been able to help her."

"Moderator: And what do you think: how successful is IVF?

Scarlett: I have an aunt who tried, as far as I know... unfortunately, I don't know how many times, but it wasn't successful. I have the impression that it isn't very successful, it doesn't work in the majority of cases."

Negative experiences of relatives with IVF were also mentioned, but it was also argued that for others it did seem to help (for example, as seen in the media), so the final conclusions were optimistic.

No cases were reported involving acquaintances being told that they could not have IVF because of age, or where it was clearly understood that fertility was an age-related problem. Also, IVF with donated eggs was not mentioned in any of the groups in relation to an acquaintance.

According to respondents' accounts, infertility and reproductive technologies were not a topic of discussion between these young women and their families/acquaintances unless there was a family member/acquaintance dealing with this problem. The pressure to have a child ("the sooner the better") from their family members and older relatives was felt by some of the MA students – but in these discussions age-related fertility decline did not come up as a topic.

Information learnt in school as conversational resource

Information learnt in school was rarely referred to. Some respondents openly said that the emphasis in school with respect to fertility was on how easily one

could get pregnant, connected with arguments for the importance of using contraception. If biology classes were mentioned, it was mainly in reference to the claims of respondents that they could not remember what they had been taught about infertility.

DISCUSSION AND CONCLUSIONS

Study of lay reasoning in focus groups shows that although most participants had a general sense that age and fertility were related, there were gaps in the knowledge regarding the degree of fertility decline, the timing of the fertility decline, as well as the end of fertility. Elements of the knowledge gap in the lay understanding included not knowing the biological causes of age-related fertility decline, and not knowing that, beyond a certain age, IVF only makes sense with donor eggs. There also seemed to be issues in the group with understanding the logical relationship between two factors and the related probability of their association (age-fertility). In the lay reasoning in the group discussions, fertility and technology myths surfaced again and again. The chances of advanced-age genetic motherhood were often overestimated, and the relationship between age and fertility underrated. Many respondents were very optimistic about how technology could help with genetic motherhood at an advanced age.

An important phenomenon that arose in the discussions of these young women about age-related fertility problems was resistance to the idea of personal risk. This underscores the arguments contained in the contextual approaches of science and technology studies involving science/health communication which emphasize that diverse social-psychological phenomena interact when health risk information is received (Gallagher – Updegraff 2012). In the groups, resistance arose to the idea of respondents themselves having to deal with age-related fertility decline in the future. Many participants emphasized factors that they felt to be more important than age for fertility (e.g. a healthy lifestyle), perhaps wanting to reassure themselves that they could maintain control of their reproductive possibilities. In many groups there were attempts to underestimate the effect of age, and to emphasize that the impact of age on fertility was very "individual," and did not apply to everybody. Denial was also apparent in the fact that respondents categorized themselves as healthy, in contrast to the ill people who would have infertility problems. Resistance was also a recurrent hallmark of reactions to the pressure that our respondents felt they faced from society and family to have a child as soon as possible. A few participants openly admitted that they would prefer to believe the success stories that the media

presented them with. The results show that making sense of the issue of fertility decline involves more than just acknowledging that such a phenomenon exists (many of the respondents did acknowledge this), but a second step – admitting that this issue might potentially apply to them in the future – was often missing. Some of the sample did not believe in their vulnerability to the threat of age-related fertility decline.

Maeda et al. (2016) found that the probability of feelings of anxiousness increased among respondents linearly with age after the latter were informed of facts about the age-related fertility decline. In the current study, anxiety was not voiced, but rather resistance towards the idea that infertility is an issue that the respondents would have to deal with in their own lives. However, not only was the sample small, but it was comprised of a specific demographic group: young university students. Further research is needed to investigate the range of reactions and beliefs among reproductive-age women of other ages.

The results also illustrate the power of examples in the reasoning process – an argument that exemplification theory researchers have been making for some time in other topics (Zillman 1999, 2006). Exemplication researchers have argued that the way information is formulated can influence how it is received, and that if a media story contains an example case this can have a greater effect on opinions than if statistics are presented (Hastall et al. 2013). A prominent mode of making sense of age-related fertility decline and the role of technology in the group discussions was reference to examples of cases in the media and to cases of acquaintances, family members, and friends. Often the logical fallacy of hasty generalization was employed openly, or sometimes implicitly in respect to these cases. Most of these hasty generalizations were made in line with, or in support of, fertility and technology myths (although in the case of closer acquaintances who had experience with the related technology, examples of the failure of technology were sometimes mentioned).

The accounts suggest that there might be some asymmetry in the visibility of success and failure. Success stories were highly visible to group members both in the media and with acquaintances. Acquaintances and media actors did not even have to talk about the details: the mere fact that a baby had been born at a certain maternal age signaled to many research subjects the possibilities and sometimes even the ease of motherhood at that age. With the postponement of parenthood, more women are having children in Hungary at advanced ages than in earlier decades (Kamarás 2012), thus one is more likely to meet women who became mothers at an advanced age than earlier, which might be strengthening perceptions of success.

In contrast, age-related fertility problems seem to have low visibility. In some cases acquaintances do not speak about fertility problems to others – except

perhaps to family and some close friends (at least this seems to be the case with the research participants' acquaintances). Thus, people might not know that their acquaintances are struggling with fertility problems. Moreover, according to the perceptions of the participants, age-related fertility decline as a topic was basically absent from the media.

It was also notable how the school and family were places where the sample of young adults were given no information about age-related fertility decline. This may be because the focus of sex education in schools on not getting pregnant at a young age emphasizes how easy it is to become pregnant, and also because the respondents' parents' generation did not have to deal with consequences of postponed childbirth to such a degree.

There is also the problem of the complexity of factors in each individual case which may contribute to the low visibility of the problem amongst the lay population. It can be hard to separate the effect of age from that of illness, which can also be age-related, thus some fertility problems might be attributed to this factor (Mills et al. 2014). How gynecologists communicate these issues with patients might also affect how the latter think about their infertility problems and what they communicate about them to others, including whether they are related to age-related fertility decline. Mac Dougall et al. (2013) argue that the extent of age-related fertility decline is not appreciated by many physicians who are not infertility specialists. There are some indications that this might be the case in Hungary, although I have not investigated this systematically. If this were indeed the case (that gynecologists underplay the role of age-related infertility), it could also contribute to the knowledge deficit of the lay population.

The results of the current study on the existence of fertility and technology myths are consistent with previous research that has shown knowledge gaps and the frequent presence of overly positive beliefs about reproductive possibilities (Bretherick et al. 2010, Bunting et al. 2013, Conceição et al. 2017, Cooke et al. 2012, Daniluk – Koert 2015, Daniluk et al. 2012, Friese et al. 2006, Hashiloni-Dolev et al. 2011, Hewlett 2002, Gossett et al. 2013, Lampic et al. 2006, Maheshwari et al. 2008; Maeda et al. 2016; Mac Dougall et al. 2013, Peterson et al. 2012). Additionally, work has shown that some lay people are of the view that a healthy lifestyle can offer a level of protection against age-related infertility (Bunting et al. 2013). The current work contributes to the above (mainly quantitative) body of work and extends it by giving a rich and deep description of the sense-making process and lay reasoning present in group discussions with young women in Hungary. It shows how these young women rely on information sources in their reasoning, and demonstrates that resistance and exemplification are two social-psychological phenomena which can be present in these interpretation processes and which can contribute

to overly positive assessments of respondents' future relationship with age-related fertility decline.

The limitations of the study include its non-representative nature. However, as the results discussed in the article were repeated in multiple focus groups, they might also be of relevance outside the specific situation of the focus groups they originated in. Whilst the situation in Hungary may be distinct in some aspects compared to that of other countries,[2] the results suggest that there are benefits to studying the reasoning processes underlying technology and fertility myths.

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2 For example, there may be even less knowledge in Hungary than in countries like the USA where elective egg freezing is legal and advertisements draw attention to the phenomenon of age-related fertility decline, and also where the plans of some companies to offer elective egg freezing have been covered in high-profile media stories.

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GENDER IDENTITIES AND FARM SURVIVAL: WOMEN'S ACTIVITIES IN THE AGRICULTURAL SECTOR IN REMOTE RURAL AREAS

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ABSTRACT *Despite the structurally deterministic leanings of the literature about women and farms over time, new studies have attempted to identify the ways in which women's positions in the rural household are reinforced, stressing the factor of visibility in the labor force. The entrepreneurial processes and commodification practices through which women engage in a range of different kinds of productive activity, such as agrotourism and the production of organic crops, are frequently cited as sources of empowerment for women on farms . However, since this new trend is not a unitary and homogeneous process, the present study examines the role of women in agriculture by taking into account the positionality of the specific actors, as well as their conflicts and negotiations within particular sociocultural contexts. Our analysis is based on sets of in-depth interviews with full-time farm women in Jirestan, north-eastern Iran. Findings indicate that Jirestan's women identify themselves both as "producers" and "entrepreneurs." Commercial gardens, in addition to new farming styles and the reproduction of sales of traditional local produce, have created this "hybrid" identity. Although farms are being re-constructed as shared businesses with an increase in the role of women, the latter still adhere to patriarchal traditions and social norms and consider themselves helpers and housewives.*

KEYWORDS: *women's roles, entrepreneur, producer, agricultural sector, Jirestan.*

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INTRODUCTION

Since the 1990s, many pieces of research have highlighted the key role of women in the agricultural sector (Bock 1994; Ventura 1994; Whatmore 1991), identifying them as "farmers" (not housewives, or farmers' wives) (Little and Panelli 2003). Before this time, rural women were considered in different policy arenas to be members of a vulnerable and marginal social group (Little 2009; ONS 2003). With the social and economic reforms of rural areas – especially in western and European societies – the role of women has expanded in the agricultural sector with the aim of diversifying and increasing on- and off-farm production (Clark 2009; Meerburg et al. 2009). Consequently, many entrepreneurship-related innovations have appeared in the rural economy (Rubin and Manfre 2014). In other words, economic and social changes in rural areas have been followed by the active presence of women in the agricultural sector, and farming families have turned to exploiting diverse and multifunctional sources of income. Rural women have created small businesses on their household farms, including agrotourism activities (Flangian et al. 2014), the processing of traditional foods and agricultural products (Anthopoulou 2010). Certainly, the small businesses of rural women are creating products with specific qualities; such products typically preserve their geographical origin and are traditional, organic, and natural (Marsden 1998; Sylvander 1994). With the trend for people, especially urban residents, to consume more rural and traditional foods, production for the market is being substituted by production for the the nearest place (direct marketing). In fact, the distance of farms from market is declining and local demand for rural products is increasing (Ilbery and Kneafsey 2000). Therefore, many pieces of research have been created around ecofeminism and environmental issues in which the relationship of women with the environment and nature is investigated (Bryant and Pini 2006). However, the diversification and multifunctional economic activities of rural families are not limited to the role of women on farms; they can also include the role of women outside farms and households (Markantoni 2012).

In recent years, the rural areas of Jirestan (one of the districts in Shirvan County, North Khorasan Province) have changed extensively, and the role of women in the agricultural sector has become more widespread and dominant. The presence of Jirestan's women in leading roles is linked in the first instance to the absence of males on the farm. As men move out of family farming in countries in the Middle East and North Africa, women tend to stay, or move out of the sector a lot more slowly (Lastarria-Cornhiel 2008). The assumption of a leading role for woman in these cases does not often entail their exercise of managerial duties, but corresponds to a kind of lending of their name to the

husband, son or father, who are the de facto heads of the farm or co-managers. Moreover, the increase in the number of Jirestan's women in leading roles can often be observed on small-scale, part-time farms, either because the demands of managerial work are slighter in the former, or, more usually, because men have more frequent recourse to non-farm employment than woman. The phenomenon is referred to as the feminization of part-time farming (Sachs and Alston 2010). The persistence of small and very small family farm holdings in Jirestan and the relative sparseness of agricultural resources because of the mountainous region induced Jirestan's farmers from a very early date to look for additional ways to earn money, both within farming and outside of it. However, it is now expected that Jirestan's women seek extra sources of income by diversifying their on- and off farm production with an emphasis on local traditions and heritage.

Overall, part-time farming encompasses a plurality of activities that challenge the simplistic approach to this concept. Since diversification is not a unitary nor a homogeneous process, it cannot be interpreted without accounting for agency, conflict, and negotiation within particular sociocultural contexts (Galani-Moutafi 2013). Discussion of the various forms of diversification and sources of additional income unravels sociocultural and spatial complexities in agriculture and rural life at the intersection of the local and global. Nevertheless, most of the empirical studies that underpin post-productivism and multifunctionality contributions have generally focused on individual women's niche initiatives (for instance, the development of quality products, or agrotourism). Studies have additionally identified the purpose of these diverse forms of work as being the stabilisation and increase of low and variable agricultural incomes. Of course, besides this, other factors such as the characteristics of local and regional labor markets, land markets, and the type of production orientation and level of mechanization are also referred to. This focus has potentially resulted in neglect of the key explanatory elements of the internal dynamics of agriculture. Additionally, some academics have expressed doubt about the expansion of innovative activities in Iran, and particularly Jirestan. It is also clear that farm women are not a homogeneous group. Nevertheless, many studies have attempted to homogenize the various typologies of women's roles and the concept of the feminization of agriculture by referring to three main roles: "*substitution* (women taking over activities because economic development allows men to disdain them); *integration* (where women do work ostensibly considered traditional for their sex), and *competition* (where women vie with men for equal employment opportunities and in all aspects of social and political life)" (Byrne et al. 2014).

In this article, the intent is to describe the difficulty the farm population has had in shaping its identity and its image with respect to the rest of society.

Bourdieu (1977: 3) famously stated that the farm population can be thought of as an "objectified social class," and "a social class dispossessed of its power to define its own identity." However, the role of women in agriculture cannot be analyzed without accounting for the positionality of the specific actors, as well as their practices and experiences. I seek here to explore the extent to which farmers can impact public perceptions of rural life and agriculture. The following research questions are posed: What kinds of roles do women consider undertaking in farming, and is their self-perception compatible with these new styles of farming?

THEORETICAL FRAMEWORK

Literature review on women in the agricultural sector

Recent research about the role of women in the agricultural sector has focused on the social inequalities associated with the gender-based division of labor in rural areas and the marginalization of women (Bryant and Pini 2009: 48). In other words, agricultural history is perceived as a masculine and patriarchal process without any place for women (Brandth 2002). The accepted gender pattern is a patrilineal one in which the son has the right to substitute the father and continue his agricultural occupation. This is one of the processes which contribute to social inequity and make the role of women in the agricultural sector invisible (Sachs, 1983). However, women play a complementary role in the agricultural sector and should learn to consider themselves as auxiliary workers, not farmers (Brandth 2002). Wahtmore (1991) puts forward a combination of political and feminist viewpoints to claim that the wageless role of women in household farms is a form of support for the economy of the family. It has been said that women can only enter the agricultural sector by marrying a farmer and thereby obtaining a complementary role in earning family income (Shortall 2001). But, in reality, women are "only farmers' wives" and are often considered to be assistants (Bryant 1999), while the main management roles of the farm are in the hands of men. These kinds of stereotypes have emerged from the social conformity of rural women and their marginal roles as wives and housewives (Little and Panelli 2003). Another justification for the marginal role of women in the agricultural sector is a biological claim regarding their bodies and lesser physical strength (Trauger et al. 2008). Agriculture-related discourse is threaded through with patriarchal perspectives about women's bodies (Brandth 2006). According to Brandth (2006), farm work is defined by physical activity

and requires bodily strength. Therefore, physical activity in the agricultural sector is totally symbolized by men's bodies, both physically and symbolically. Since women's bodies lack masculine characteristics and are believed to be less suitable for work in the agricultural sector, they are only given part-time duties and thus work less than men (Saugeres 2002). Much research which has been carried out on the role of patriarchal hegemony in the agricultural sector has highlighted the relationship between the physical body (physical strength) and brevity, courage, fearlessness, strength, physical readiness, and the ability to withstand hard work (Leipins 2000). Saugress (2002) and also Bryant and Pini (2006) report that the aim of using machinery and agricultural technology is to remove women from the agricultural sector through patriarchal ideology. For instance, the former authors claim that "a tractor is a symbol of men's power and a means of dominating women." Moreover, agricultural education is strongly patriarchal and rarely leads to improvements in the education of rural women (Kloppenburg 1991). It is not an exaggeration to say that gender studies have expanded widely into the field of rural agriculture both theoretically and experimentally (Little 2002; Little 2009). Although patriarchy is a fixed concept in most of this research, the role of women as an emerging factor due to the commercialization of informal (traditional) occupations and their presence in the agricultural sector as suppliers of household economic needs (Bock, 1994) is becoming widespread. Studies are emerging in the field of new agriculture which suggest that women are engaging in a wide range of activities, such as agrotourism, the direct marketing of products and local sales, the production of high quality products which are environmentally friendly, and the creation of new job opportunities on farms based on local culture and tradition. Moreover, some new activities are being defined in relation to agricultural reforms and the transition from productivity to post-productivity. These activities focus on substituting production with intensive farming (decreasing dependency on agriculture by new entrepreneurs), an emphasis on environmental protection, and support for the vitality of villages and rural areas (Kazakopoulos and Gidarakou 2003). This shift can increase the presence of women in the agricultural sector by strengthening them and transforming their marginal and subordinate roles into managerial ones, and by strengthening their organizational status associated with public decision making (cooperatives, etc.) (Ibid, 401). This can simultaneously challenge the patriarchal and masculine rule of men. According to Saugeres (2002), the diversity of emerging activities for women may challenge the masculine role of men regarding their use of agricultural machinery and technology, especially the heavy machinery which is used for mass production, farm asset control, strength, tolerance of hard work, pride and enjoyment from their presence on farms. On the other hand, the necessity of changing training

models, agricultural education, and of improving women's knowledge to make it consistent with the new agricultural structure and the establishment of new economies in rural areas should be taken into consideration (Trauger 2004).

Consequently, gender gaps are fading away in Jirestan district and women are becoming increasingly involved in the agricultural sector so that most of the responsibilities traditionally dedicated to women and men do not come into play, except in some cases. The recession that occurred in the agricultural sector and the related reduction in income as a result of liberalization and deregulation, as well as climate change, has impelled Jirestan's women to find sources of additional income. On-farm employment has thus become more common among women, thereby contributing to the survival of farms. In other words, the recombination of existing resources (more than the incorporation of of new and different sources) has occurred. It appears that Jirestan's women have become more orientated towards familiar forms of occupational activity such as the creation of organic, artisanal, "natural," farm-processed products that are related to their nomadic[2] past. In short, women are registering as important local actors in the conservation of cultural heritage and in the transformation of local resources into marketable commodities through rural tourism and local retail trade. Additionally, for Jirestan's women it is important to maintain the integrity of the land, the pasture, and the home and its related activities in the style of the past, as was common to the nomadic family. However, the related incomes are regarded as contributions rather than independent incomes. Such survival strategies in declining rural communities are often chosen because they are socially and culturally acceptable, rather than economically optimal. Adherence to patriarchal norms is widespread among Jirestan's women. This means that, although the rural economy is becoming more women-centered, the tendency toward subordination to men and conformance with their commands continues to occur in the agricultural sector. These findings indicate that farm resilience needs to be understood in the context of gender. Accepting the implications of this argument, we focus in the present paper on the motives and aspirations of rural women, as well as on their role on farms. The following research question is now addressed: To what extent is the presence of Jirestan's women in agriculture related to different representations of rurality?

2 Nomadism is a lifestyle adapted to infertile regions such as steppe, tundra, or ice and sand, where mobility is the most efficient strategy for exploiting scarce resources. One of the most important elements in nomadic life is family production. Creating products, whether for sale or for the domestic consumption of the family, involves the work and collaboration of all members of the family. The economy of nomadic families is based on shared emotional, social and economic relations (material and spiritual) and a sense of responsibility towards each other is directed towards men.

Theories of Identity

Identity is a part of self-concept and an answer to the question "Who am I?" (Augoustinos and Walker 1995). Rose (1995) defines identity as our understanding and perception of ourselves. This includes all the daily experiences and mental feelings related to the consciousness of life. Since life is always going on and we encounter various and unpredictable experiences, identity cannot be fixed and unchangeable, and new mental definitions of daily activities arise (Leyshon 2008). Many hypotheses have been presented in this regard, based on different fields of study. Stets and Burke (2003) have described two main sociological theories about identity, self-categorization and identification. The basis of self-categorization is paying attention to the different dimensions of identity which result from group membership. In fact, society consists of individuals who have relations with each other based on their power; the structure of these relationships are of significance in the formation of identity. People try to compare their own group with other groups in order to prove their superiority; this is called inter-group comparison. This process by which people separate the members of their own group from the members of other groups is referred to as social self-categorization (Stets and Burke 2000). There exist different self-categorizations about the role of women in the agricultural sector which can be differentiated as women as producers and women as entrepreneurs: also, as farmers' wives, assistants, and helpers. In terms of identification (which is a guide to identity decoding in this paper), the individual does not engage in self-categorization on the basis of specific groups, but considers their own specific role in a group or social structure (Vesala and Vesala 2010). Importantly, when farm women's agency is discussed, content has centred on the economic and emotional impact of on-off farm work. According to this idea, changes in the roles and abilities of women occur, but women tend to protect male farmers' identity, allowing "the family farm discourse to persist," and raising questions about the costs which arise for farm women's identities. Joint Farming Ventures (JFVs) are a business model which refers to two or more farmers involved in a farm business without necessarily co-owning the land on which the business is operated (Macken-Walsh and Roche 2012).

DATA AND METHODS

A qualitative method was used in this study, along with content analysis (Neuman 2011), to identify the life experiences of rural women and present a real and deep understanding of the meaning of these experiences (Gilbert 2001). The participants are rural women who work full-time on farms. The main criteria for inclusion in the study was the migration of the head of the household to the city (seeking a better occupation and higher income), and, more importantly, the commercial function of the related agricultural practices, and production for market. A purposeful sampling method was used (initially including 30 women). To access participants more rapidly, a snowball sampling method was used simultaneously (Patton 2002). Brewer et al. (2002) consider 20-30 participants and Holloway and Galvin (2006) 40-45 participants to be sufficient for the identification of a coherent set of specified items. The sampling process was continued until data saturation. Finally, 57 participants were selected based on the demands of the qualitative method and data saturation.

The present study was carried out in Jirestan, one of the districts of Shirvan County in North Khorasan Province. This district is located in the Kopet Dag mountain range on the frontier of Turkmenistan and Iran. According to the 2011 census, the population was 5166 in 17 rural settlements of Jirestan. Most of the rural settlements have more than 20 families. Agriculture is practiced only on a small scale and in smallholdings due to climate change, the mountainous conditions, and a land slope greater than 20%. Most production is related to herding, transhumance of livestock, nomadic cattle grazing on pastures (according to the nomadic background of the local residents) or is limited to the surroundings of settlements. However, agriculture, gardening, and pastoralism have become the main economic pillars of Jirestan. In the 2014 agricultural census, 3306 people were employed in the agricultural sector. Since women were not included in this census, there are no accurate or reliable statistics about the number of men and women employed in the sector.

Semi-structured in-depth interviews were used for data collection (Flick 2009). According to the mood of participants, the interviews lasted 20-40 minutes. The structure of the interviews took the form of the following questions: 1) Do you consider yourself or your husband to be responsible for agricultural affairs? 2) Is your presence on the farm due to the aim of achieving income independence, or helping support your family? 3) From your perspective, has agriculture changed since the time when men were primarily responsible? 4) Does agriculture generate a good income and solve your family's problems? 5) Do you think agriculture meets the needs of townspeople and tourists, or do you produce only for the market?

Figure 1 *Location of case study in Shirvan County*

Source: Author

Interviews were recorded and transcribed word for word with the permission of participants. After the transcription of interviews and their accurate analysis the researcher examined their internal and external elements. Each interview was listened to several times to obtain a deeper understanding of participants. After frequent replays, semantic units and main messages were identified. Different parts of the text were summarized and coded using qualitative analysis software (MAXQDA). Codes were compared regarding similarities and differences, then categories and sub-categories were formed based on theme congruence.

RESEARCH FINDINGS

The Split between Culture and Land Use (Pasture and Agriculture)

The common characteristic of Jirestan's rural areas is their "gender rurality," according to which women live in rural environment yet have economic and social responsibilities, while men leave their rural lives (permanently or seasonally) to live in cities. However, this practice takes different shapes and

forms according to local and social characteristics and causes some dissociation. Among these, the paradigm of leaving/staying, and interfering/not interfering can be identified. Changes in the agricultural professions of Jirestan's women are considered to be the embodiment of a disorderly and critical situation which is the culmination of a specific time and local identity. Therefore, social changes in rurality force people to leave their herding and transhumance professions, along with their agricultural traditions. The narratives obtained from interviews indicate the formerly strong emphasis on handling domestic affairs, the production of specific livestock and crops, the interactions and division of labor between men and women and children, and everyone's active participation in rural economic affairs. Jirestan's women claimed that:

> *"In the past, agriculture was traditional and the level of production was so low...families were self-reliant…women did not interfere in agricultural affairs, and only handled household affairs and protected and raised their children… however, now they are mostly seen on agricultural farms…since the needs of rural people have changed through time and the cost of living has risen, therefore, we need to go to the farms" (Code 1-1/Interview: 4/47 year old/Alkhas).*

> *"We have been nomads and pastoral people for many years…although the number of livestock has declined significantly, but in the past engagement in agriculture was aimed at providing for household needs and livestock food (such as wheat, barley, peas, and lentils)…everything has changed…commercial gardening has become more widespread (such as raising peaches)... sales are only for the sake of the market" (Code 1-2/Interview: 2/42 year old/Kuseh).*

> *"In the past, we never used chemical fertilizers and poisons on our products...pestilence was so rare, and products were not corrupted or wasted…but in the meantime, money has become everything, and people are in agriculture for the sake of the money" (Code 1-3/ Interview: 3/52 year old/Kalateh-ye Nazar Mohammad).*

> *"In the past, children helped us with pastoralism and agricultural affairs…but now they are in the cities, they do not like to live in countryside and help us like in those times…a lack of facilities has robbed them of such kinds of motivation" (Code 1-4/ Interview: 1/38 year old/Takht).*

These narratives indicate that identity and production have become divorced from moral and cultural values (Paniagua 2014). Jirestan's men and women have changed their economic relations due to the migration of their sons to cities, and are less engaged in in herding and the pastoral life, leading to the displacement of farms and pastoralism-related products. With the permanent out-migration of youth to cities seeking educational opportunities, herding and transhumance activities have reduced the number of livestock in rural settlements. Therefore, rural people have been forced to integrate their livestock into one herd and to hire shepherds. In other cases they have sold their livestock and started keeping livestock (such as cows) and engaging in animal husbandry. As a consequence, the traditional heads of families who worked on farms and gardens have gradually handed over the responsibilities of this sector to women, and started to graze cattle in pastures, as previously done by the sons of the family. However, the heads of families have been forced to leave even this profession and migrate to cities.

The transition of farm management from men to women cannot be considered typical of the transition to market production, since this responsibility is associated with some concerns and problems. In fact, the motivations of settlers were not limited to economic issues and included some consideration for earlier forms of production. Emotional needs mean that people desire to keep their connection to the land (pastures and agriculture) and family members (nostalgia and the sense of belonging to a place). This is possible through maintaining a presence on farms, creating agricultural products, and handling household affairs. Although in many studies the role of women has been considered to be derived from their need for extra income from entrepreneurial initiatives as the only logical option, women also want to play a specific role that meets some of their daily expectations, which are not only economic. While the Local Community Paradigm challenges this fact (Barth 1966: 36), it is believed that the drivers of farmers' activity concern more than mere economic matters. The real desire of women who are present in the agricultural sector is for symbolic integrity with men, children, and households, rather than for extra income and engagement in entrepreneurial initiatives. Therefore, the attachment of women to land and work can take the form of a simple tribute to their husbands and children in difficult economic times, along with a sense of ethical responsibility regarding the need to preserve businesses.

Alternative visions of self and rurality

Jirestan's women who have been influenced by the processes of glocalization have integrated their agricultural pursuits with agrotourism, involving representations of heritage and culture at permanent or seasonal sites and production and and sale of their wares. They have seen change, both personal and in the community, as an opportunity either to exploit endogenous resources or to embed and adjust their entrepreneurial practices to a new framework. Jirestan's women have exploited opportunities for socioeconomic management in ways that rely on the coherence of family members and the integrity of the farm, pasture and home, while culturalizing the economy in the context of tourism. In leaving behind their daily routines and taking up agricultural responsibility, they have become aware of themselves and their relationships as nomadic families. The economy of such families is based on a complex arrangement of shared emotional, social and economic relations (material and spiritual), while a sense of responsibility towards men also exists. In Jirestan, the revivification of Joint Farming as a business model for family farms has improved the economic resilience of farm households and reduced social isolation in rural areas. While everyday changes in agriculture have contributed to the gap in households, women's work has played an important role in preserving communal life and patriarchal traditions. As one woman explained:

> *"Although my husband has migrated to the city, he is still is the main manager of agricultural affairs...I assist him in all these affairs... however, the children help us a lot when they are in the village... This means that the solidarity of the family comes from the nomadic background of the village" (Code 2-1/Interview: 2/60 year old/ Kaltamanlu).*

> *"It does not matter who is responsible...we should do everything together...because it is not possible to do all the work alone...all the family members should collaborate" (Code 2-2/Interview: 1/57 year old/Malvanlu).*

Besides considerations related to commercial value, women believe in increasing the amount of products made in Jirestan in order earn money that is a resource for supporting local retail trade and agrotourism businesses. Furthermore, in addition to focusing on traditional products, reference is often made to geographical origin or the virtue of quality and health, with a focus on meeting the socially constructed perceptions of consumers embedded in

the trend towards new consumption frameworks in the context of the local-global nexus. But respondents also claimed that these incomes are regarded as contributions rather than independent incomes. As one woman explained:

> *"Surely I work in the agricultural sector in order to help my family and protect my children…my husband cannot provide for me and my children in this difficult economic situation …it is my duty to help him and lessen the burden of responsibility for him" (Code 2-3/Interview: 3/44 year old/Malvanlu).*

> *"In mutual married life, financial independence is meaningless…all of the family members should collaborate to improve the quality of life…I would not leave my husband and my children alone…if I have savings, I will spend them for my family in times of need" (Code 2-4/Interview: 2/Palkanlu-ye Pain).*

These statements indicate that rural women are using economic and social opportunities and creating a web of social capital in connection with land and family members; however, the agricultural economy is still associated with local culture. Although the narratives show no contradictions or tension, an internal reading suggests resistance against the predominant social order and reflects the creation of a real and alternative space. These alternatives – apart from representing the ideology and rationalization of this changed space – reflect some worries about the future relations of men and women, and even their children, which will affect agriculture, pastoralism, household affairs, and people's roles more generally.

Overall, Jirestan's women's re-evaluation of the rural is based on criteria related to the integration of activities and joint economics and the revitalization of the rural as a central framework of reference for their local retail trade and agrotourism businesses. In their discourse, one can locate the cultural texture of a type of rurality and a sense of identity rooted in and symbolized by the length of association with the specific locality which has been inscribed by work and the desire to improve livelihoods and families.

Production-Oriented Agriculture as Divergent from Entrepreneurial Activity

In Jirestan, small-farm-based businesses run by women have flowered in recent years. These include vegetable farming, and the creation of traditional

home-made products. Women have cultivated vegetables in commercial gardens that are supplied directly to customers in the form of fresh, high quality, healthy products . As one woman explained:

> *"Agriculture has not changed so much… Production for sale in the market continues… But besides conventional farming, we have cultivated vegetables… In general, the amount of cultivation and production in the village has increased due to the diversification of farming" (Code 3-2/Interview: 2/57 year old/Charmeh).*

Further analysis of the findings about Jirestan's women's businesses indicates that women are choosing their own models for their business, which are still based on traditions of nomadic life and personal creativity. A lot of milk, yogurt, cheese, and cream are produced every day. Such products are also offered to local retail outlets and restaurants, in addition to tourists and for direct sale to households. As one woman explained:

> *"In addition to vegetables...we would like to have familiar forms of products like yogurt and butter at home ...while many advisers suggest that you can make new products like spreads, pickles, jams...I would say that this kind of production takes a lot of time and energy...Finding customers for them is hard...Customers demand our vegetables and dairy products more than other creations." (Code 3-5/Interview: 1/52 year old/Kuseh).*

> *"Since we are engaged in selling vegetables and processing livestock products... keeping livestock and working at home does not allow for other innovative activities…Additionally, we do not have the skills" (Code 3-7/Interview: 4/55 year old/ Palkanlu-ye Bala).*

Women become active, in other words, in the areas where they are able to make use of tacit knowledge and know-how. Furthermore, the cultivation of vegetables and the processing of livestock products by women is also contributing to the sustainability of farms and the creation of financial resources for gardening and the survival of families. However, the multifunctional activities of Iranian farms, especially in Jirestan, are not new and are currently considered to be one of the main principles of rural life. Working agricultural land in Iran, and especially in the mountainous lands of Jirestan, involves small-scale activity that has not always met the needs of families. Therefore, new income sources have had to be found. One of our female respondents stated that :

"Agriculture brings a good income…but it is not sufficient for meeting the needs of a family...other activities should be done along with that… it was also so in the past…Of course, at the moment, this strategy is being implemented through new practices within a set of social and economic relations" (Code 3-8/Interview: 3/61 year old/Alkhas).

The conclusion is that, similar to the findings of Perkins (2006) and Woods (2010), the changed space of villages should not be considered equivalent to agricultural and production spaces. The reason is that we increasingly encounter the reform of economic structures, and production for market is being replaced by a processes of commodification involving new buyers (urban buyers), while entrepreneurial opportunities involve the spread of local production and greater value being placed on local food, natural scenery, and cultural values. New economic tendencies (tourism and leisure patterns) require a new definition of villages and rural areas, and Jirestan's settlers, as will be explained, are seeking to reinvent and render services to tourists and visitors that involve the connection between culture and agriculture.

Traditional Production Methods

Jirestan's women are applying their newly acquired skills and competencies and combining them with local traditions to produce and supply products to visitors and tourists, representing a different perspective on economics and rural life. The new styles of agriculture and home-based production could be seen as a form of nostalgia for a nomadic era, but the need for new social and symbolic realities which preserve the family and cultural and traditions is clear. Jirestan's women consider themselves to be guardians of local traditions, even though they have discovered new means of producing and selling since they have become involved in these new economic and social spaces. They believe that:

"Most of the garden products like apples are sold unprocessed in the markets of big cities and do not need to be processed… But the vegetables and dairy products in Jirestan are of high value and as luxury products they have their own customers" (Code 4-1/Interview: 2/39 year old/Kaltamanlu).

This claim reminds us that in local production chemicals and pesticides are not used. Though women have taken responsibility for commercial gardens and

can certainly produce for market, their acceptance of this responsibility has not prevented them from engaging in entrepreneurial activities whereby they have acquired empirical mastery of the techniques of production, with the women themselves seeing themselves as organic producers (vegetables, cucumbers, tomatoes) or as parts of well-known (to them) family businesses they have inherited (producing cheese, yogurt, cream, whey, and animal-based oils). As one woman explained:

> *"Selling unprocessed garden products...provides us with an opportunity to work on the skills we have acquired" (Code 4-2/Interview: 3/58 year old/Kalateh-ye Nazar Mohammad).*

The current perspectives of Jirestan's women about locality – as a source of knowledge and rational encounters with living conditions – guides their interaction with agriculture and culture. In fact, the role of women in the agricultural sector is dependent on certain tasks and perceptions about ones they were previously engaged in. The role of women in Jirestan involves a combination of different tasks and is founded on the belief that women should not merely focus their energy in one direction but should engage in multiple tasks simultaneously. One of the respondents stated that:

> *"We are simultaneously producers (active in commercial gardens and producing for the market) as well as entrepreneurs (producing vegetables and dairy products for direct supply to visitors and tourists at the farm or through retail) ...Work at the farm and at home, as well as production for the market meets the demand of urban customers for agricultural and home-made products and is characteristic of the women in this region" (Code 4-3/Interview: 1/50 year old/Milanlu Solfa).*

In this way, women are engaging in a unique synthesis of techniques that include working with (agri) culture and nature.

DISCUSSION AND CONCLUSION

This research has shown the importance of the cultural and social aspects involved in women's participation in agriculture. Beyond the factors of the agricultural recession, the out-migration of men, climate change and livestock

decline, the motivation of women is mainly based on the cultural and traditional character of nomadic life and a desire to symbolically integrate agriculture, pasture and home, as well as adherence to patriarchal constructions, which is recognized as an element which in some cases distinguishes people rooted in the locality from outsiders. Jirestan's women identify themselves both as "producers" and "entrepreneurs": commercial gardens, besides new farming styles and traditional local produce, have created this "hybrid" identity. This means that farmers are not experiencing entrepreneurship as something distant from themselves and as not fitting into their world of ideas. They are committed to engaging in agricultural production based on earlier practices when men were present in rural areas. The emergence of new forms of symbolic production, however, may be considered the basis for maintaining conventional farming. Nevertheless, Jirestan's women are being turned into the living embodiments of collective natural and cultural histories, and in this way are creating value: mixing production, consumption and showcasing the special and intimate attachment they feel toward their land, families and rural area.

From the analysis of the research findings in this paper it is clear that the partnership model is increasingly being favoured, whereby two or more farmers operate a farm business jointly without necessarily co-owning the land on which the business is operated. Jirestan's women speak of the farms they work on as "our farms," recognizing them as collective enterprises. This infers the same work and collective effort and solidarity between family members as existed in their former roles as nomads in Jirestan. Women still adhere to patriarchal traditions and social norms and consider themselves as helpers and housewives. However, despite this traditional rural culture, imbued with patriarchal and patrilineal norms, Jirestan's women are persisting in their desire to become successful farmers. Production practices are changing women's economic status on family farms and raising their status as equals amongst farming men. Women want to be included in decision making and have an impact on their livelihoods, their workloads, and the future of their families and communities. But, as explained, although their presence on farms is regarded as contributory rather than empowering, it is transforming them from subordinated persons to co-managers or managers, and giving them financial independence.

In conclusion, the economic structure of farming and roles of farmers are changing. Currently, policymaking and ideas about production in universities and academic society underscore the importance of entrepreneurial agriculture for pioneering women. However, according to the present findings, rural women are following their economic interests rather responding to public policies. This paper is mostly concerned with ideas about the self-efficacy and self-confidence of women in support of an identity, and identifies the role of women

and production methods in the agricultural sector. Further studies should focus on interference between women's producer and entrepreneurial identities with general rural development and agricultural measures and policies, and the reaction of women and their family members towards this interference.

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TALES OF EPHEMERAL EXISTENCE: BETWEEN SCULPTURES, PICTOGRAMS, AND PHOTOGRAPHIES

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ABSTRACT *This article, the purpose of which is to place photography into the discussion, has been developed through the different social sciences with which it particularly deals with the anthropological, historical and social significant elements that include tales of human groups, the means of defining their existence, and rituals and manners of constructing relationships with environmental, social and cultural surroundings. The paper has six sections, starting with an introduction. The following chapter provides some keys to understanding the possible connections between sociology and photography. The third part develops a discussion of the place of the anthropological field in recognizing photography as a human and cultural practice. The next chapter opens a debate about photography, through the results of a case study in Colombia involving a discussion about the family, the construction of visual speech, the tales that individuals create in a family album, and the possible distortions and interest in building particular dialogues about the past. We conclude with theoretical reflections about the important place of visual narration and the construction of collective memory in the institution of the family. In this way, we show the continuously constructed tales that unveil the human sojourn in the world. In the same way, the family as an institution is one of those human groups that uses tools such as photography to construct their stories and their official collective memories in oral and visual discursive narrative codes.*
KEYWORDS: *photography, tale, family, collective memory, sociology*

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INTRODUCTION

The purpose of this text is to highlight the topical discussion in the social sciences – and in particular, in the sociological discipline – about social character that involves photography in many of the narratives and tales about human groups.

Academics are urged to engage in dialogue with disciplines and researchers that have thought about the problems of visual practices and, in particular, about the social practices of photography that may open up lines of reflection about this barely scrutinized field. For this purpose, some clues should be provided to help understand the possible relationship between sociology and photography in the sense of identifying historical connections in the nineteenth century, since the social disciplines have become molded in the shape of the scientific method, and since photography was invented as a scientific product thanks to advances in chemistry and physics.

Second, the development of the anthropological condition of thinking about human existence in terms of images, with all the fantasy and hues of reality this involves, demonstrates that the elements required to talk about the relationship between photography, history and myth exist, and can be used empirically to represent another perspective. Furthermore, the family practice of photography has some overtones and shades that necessarily fertilize the sociological discussion.

Topics such as oblivion, memory, album, death, image, temporality and print, inter alia, are appropriate for use in a fruitful discussion that has not only the purpose of affirmation, but also of interrogation, of questioning, and of creating possible avenues for areas of work about the subject matter that is presented. In this direction, we will try to put into the discussion, in a phenomenological way, the conception of photography in family integration through a case study carried out in Colombia in 2009 during a process of fieldwork for a sociology research thesis[2] in which several experiences with different families in Colombia were included. With this, the objective is to construct a discussion about how the family creates visual speech with different objectives and characteristics, and when rituals, collective story and memory construction, institutional speech and truths and lies, can be filtered through the photographic tale to reveal its *negatives*. In sum, one of the goals of this article is to provide some analytical keys for developing a specific debate about the relation between the construction of photographic family tales and some approaches from the social disciplines.

2 "Photography of family: Characterization of the photo story in Colombia. A case study." Julian Romero. Universidad Santo Tomás, 2009.

SOME KEYS TO UNDERSTANDING THE CONNECTION OF SOCIOLOGY TO PHOTOGRAPHY

Thinking about photography as a means of problematizing in social sciences represents a prolific approach, not only because this goal been addressed infrequently compared to other well worked over topics, but also because of the quality and depth of the investigations that have been undertaken so far, and the possibility we have to discover creative paths that allow us to identify questions with which to probe deeper.

Sociology and photography are not spatiotemporal coincidences: their forms and means of enunciation have not been free of constraint, and fewer have been the opportunities that made it possible to think and act sociological and photographically. Photography – as a modern instrument – was consolidated in the first half of the nineteenth century, while during the same period Comte discoursed about *positive philosophy* (Cours de Philosophie Positive), delineating a new and visionary way of knowing and apprehending how the world would unfold in the light of the scientific method. Photography and sociology were two fields in gestation that tried to build their means of enunciation, each one "in its own way" and through "its own words," but necessarily obeying the constraints of a period that allowed the concretization of the desire to capture the world of the external, one on the plates of the daguerreotype, and the other through theories and methodologies, thereby constructing themselves a reference –a *"disorder,"* in the words of Roland Barthes – one in the process of being born for centuries: the advent of "myself as other," converting "subject to object."

> *The vision of the world through the telescope of the telephoto lens has, then, started, for the new positive spirit of Sociology. Photography and sociology are partner disciplines, French by birth, related from their beginning. Both born in Europe, exported to America, and are re-imported at the end of the twentieth century from the United States to Europe. (De Miguel, 1998)*[3]

The year 1839 is universally declared the date of the new *discovery* of photography, and France the land which gave birth to the architect of the invention…! The first photographer in the world! But it has been modern European society that has engendered – through its culture – accurate theories about the actual conditions of the nineteenth century. Positive philosophy found determinism lacking in the idea that every goal of knowledge absolutely – i.e.

3 Translated by the author.

indissoluble truth – was being revealed through science, through the antiseptic observation of *nature*, through its post-transformation and dominion with the aim of bringing about the new order. It was claimed that science must solve the social problems produced by the bourgeois revolutions. After producing the disorder that bought about the change in monarchical structures, the bourgeois now needed to *conserve* and sharpen the goals that had been achieved, to correct problems and to produce – in all ways – the structures of the capitalist system: a Historic science that would erect monuments to big individuals, about the evolution of towns, the restless search for the indissoluble truth, and the construction of instruments capable of revealing the truth in order to examine the civilization of knowledge, of realism, of the veracity of proof, of time, of landscape and nature. Holding on to positivism – the idea that all wit creates a knowledge of reality that can be acquired from what we can observe through the senses or mechanisms that check the authenticity of the observed – the best tool for accomplishing these wishes would be photography itself, being able to create a faithful image of reality and a copy of nature. As Batchen states: "No doubt photography did eventually become a popular metaphor for the possibility of a positivist view of the world" (Batchen, 1999).

In terms of framing the relationship between humanistic and photography research, I propose two paths which have nowadays become essential; two fields of work (and more could exist more if the creativity of some were explained). The first one involves defining photography as an object of research and problem analysis – as desired –, in the dispositive of the social sciences. Sociology, History, Anthropology, Semiotics, inter alia, act with no disciplinary segments dedicated to the problems and vicissitudes of *the visual* in our society and its individuals; yet this is an emerging field of discussion, dissertation, and rigorousness, where we think of ourselves – as *homo videns* – as societies of images. The second approach envisages the concept of the construction of photography as an instrument of social analysis, a capturing technique, as files or prints of social groups that generate clues about some problems.

"Photographic theory applied to the analysis of the society is really undeveloped. Photography is accepted as art, as chemistry, sometimes even as a complaint, as a hobby, but not as Sociology" (De Miguel, 1998).[4] This claim is an affirmation of the perspectives of Jesús de Miguel and Ponce de León, two academics that risked writing a text entitled: "*For a Sociology of the photography,*" a short article that is written in a tone of incitement that poses the necessity of consolidating a theoretical and methodological perspective for thinking about that daily activity of creating pictures. The former are convinced that photography is an

4 Translated by the author.

analytical tool of social facts as much as a social activity. They affirm that any researcher who wants to know about photography and sociology must work with three types of image – let us call them ideals – namely, the *photo-window*, which aims to represent the external world, the metaphor of the window that is open and allows us to see into the exterior, with the intention of reproducing exactly what is seen (involving an empirical and detailed photo of reality; a segment of reality). On the other hand, there is also the *photo-mirror*, which gives an account of the photographer's own feelings that permeate their frames. The last form is the *photo-rule*, which represents those photos that are taken with the aim of a "social control strategy" ("advertising"), and through which on an unreal world are imposed certain manners of wearing, thinking, buying, and wishing.

If we analyze the photography of families, of political campaigns, of the sensationalist press, we do not find that such a division is arbitrary, but it is nonetheless almost useless in the sense of all forms of photography which are impregnated with all of these three characteristics, and more. We cannot be constricted by the rationalist goal of trying to stuff the multiplicity of overtones that the social world has into a couple of categories.

Anthropological approaches to some issues with image

From an evolutionary perspective, human groups have always constructed marks by which they have expressed, recorded or developed the sense of their social being and the cosmogonic, cultural, mythic, and organizational content of those ephemeral existences which civilizations must encounter.

Rupestral manifestations are expressions of ancient, historical and prehistorical cultures that have materialized their vital existence in engravings, pictograms, petroglyphs, sculptures… Carved in rocks – in a mono or polychromatic way – similarly, showing the ways in which different cultures become exhibited in images. Sculptures buried thousands of years ago in the area of San Agustín, Colombia – a town of sculptors about which nobody knows anything except what has been interpreted and studied through its sculptures buried 5000 years ago – show anthropomorphized creatures with jaguar features: an ancient symbol of force and wisdom from America. According to the inhabitants of this area, they are an artistic and religious legacy of humanity. During trips to the area years ago, I was told by a guide – a farmer on his horse – that "The sculptures that were left by this culture were like photographs of themselves. Thanks to the sculptures we can know how they looked." This statement, contributed by Aníbal, is important to preserve in relation to the human need to express itself – our countless manners – on the earth, and maybe the uncertainty of death, oblivion and memory, and in

how we describe and leave images of ourselves: "Photography is just one more link in the chain that started with facial pictograms in rocks and walls" (Silva, 1998)[5]: one more link in the world's tales and the use of language that have been used to express and manifest, as shown in tangible products of human activity. It is not impossible to think about a time – maybe centuries, maybe millennia from now – when the modern project is extinguished, and with it the family, but can still be found in those worldly edifications a dusty and forgotten book in which there are preserved a series of *curious* images of an institution that lived at one period; there is no audacity in thinking that the photo album of the modern family may be the element with which future civilizations realize how social life developed, and understand that there was a civilization that was also displayed/constructed in images through some of the techniques used to perform such a function, in this case; photography.

This element and anthropological condition of constructing existential and vital tales unveils an uncertainty and the imminent fear of oblivion, irreversible time, natural avatars and the death that has made men create – as a weapon – *knowing.* This is one of the transcendental idea of Nietzsche's work: the idea that to determine and exercise control over humans and their surroundings man constructs speeches that allow him to *cheat himself* about the basis of his world, obtaining the status of truth for all human dissertations and expressions over *himself*, using language as fixation and structure. "For that which is to count as 'truth' from this point onwards now becomes fixed, i.e. a way of designating things is invented which has the same validity and force everywhere, and the legislation of language also produces the first laws of truth" (Nietzsche, 1999).

This is why photography is not so dissimilar to petroglyphs, nor sculptures, nor the portrait-painting of the Renaissance in the sense of being an analogical creation to the person that makes it possible. But is it pure analogy? Of course not! As previously stated, the Agustina culture[6] sculptures involved certain permutations whereby men appeared with animal characteristics (tusks, snakes, jaguars, and eagles) that represented mythological creatures and a whole religious conception of the world, because these shapes that the human body takes on could only be achieved through ritual and their own sacrifice. This issue demonstrates that, at the time of being represented in a rock sculpture, there could be no reliable portrait of mans' physiognomy, way of dressing and acting in daily life, but rather such portrayals obey a metaphysical and ritual

5 Translated by the author.

6 Concept attributed to the cultures that lived in this territory of Huila – Colombia, which, lacking a name that differentiates them, are called this because San Aguntín belongs to the colonial – Spanish period.

conception, as if when sculpting these impressive rocks certain exceptional moments must occur to be spoken of in the stones.

PHOTOGRAPHY AMONG RITES, FAMILIES, AND LIES. A CASE STUDY

Can it be that photography has emerged as the most impartial, veridical, reliable technique of making representations in images?

Taking a look at family photography, we find that it captures moments appropriate for being solemnized, even if it is not true that pictures are increasingly taken of baptisms, birthdays, first communion, and weddings as the important topics repeated in family albums: again, photography portrays ritual creatures that change their position and their clothing, thus perhaps photography involves a break in the daily routine in which to *give light* to a group image – revealing its ritual nature as a technique of preserving "good moments," as if firing the flash and fixing the light in the film must happen at certain *solemn* moments worth being related in pictures.

In this case, photography is related to rites or solemn situations for the family: here, photography is understood in Bourdieu's terms as "a *technology for the reiteration of the party"* (Bourdieu, 1990), being the photographic moment in other domestic rituals: colloquially, a wedding without any time for photographs is not a wedding. This is curious, and suggests that most of the time during a celebration, in terms of the former examples, the ceremony in the church and the beginning of a party are dedicated to photography, and the prefiguration of group and couple poses. Being radical means claiming that such events only become significant if there are cameras to relate, demonstrate and even taxidermize them.

The imperialism of the photographic camera in individual lives indicates that social necessity of demonstrating and reinforcing moments which are imbued with feelings and interests, possessing the elements of truth of an organization that requires reaffirming day to day – as "group" – and being capable of demonstrating to the public in general that family ties are unbreakable, and this is one of the duties that the family has conferred to photography: a memory store. Martha Guzmán de Bolivar, mother of the Bolívar-Guzmán family in Bogotá, Colombia,[7] stated the following about photography:

7 Interview from 2009 in the frame of research of the sociology thesis "Photography of family: Characterization of the photo story in Colombia. A case study." Julian Romero. Universidad Santo Tomás, 2009.

> *"It is not much about the past, it is about having a living memory. What happens is that it seems that always it is present, but in time it becomes history because you are constantly a function of the family and you are taking pictures."*

The institutionalization of memory occurs in the fact of photography as a form of speech; it means preserving a moment in the album, thereby stipulating what is memorable in the family, and thus also what is susceptible to being forgotten. When Mrs. Martha is asked about showing her pictures, she says:

> *"Looking out for the remembering of somebody else: Do you remember that we were there? That we did many things? Ay! Look at that landscape... because it is the only thing remains to us, it is the only memory that remains to us."*

In this way it can be seen that photography has a clear function in the family: it is aimed at institutionalizing a common past, and also for generating a group identity, while the past is presented as unique, indivisible and absolute, and images are presented as irrefutable truth of the past. This means that feelings of the irreversibility *of time* have weight, but at the same time so do those of irreversibility in the sense that family members cannot forget that they are part of a group that has lived exceptional moments. The album, that family chronicle, evidence of a visually fragmented history, occasional and totally aimed at pragmatic issues in this case of memory: it creates a capital biography of the family, showing that pleasant moments are ephemeral and susceptible to being forgotten (in contrast to unpleasant ones), being the components for identification with morality, some traditions, aesthetic and mannered practices which from generation to generation are reproduced (considering the desperate change of the ages) in the rituals of the group and are fixed and filed in a family compendium. As Bourdieu says: "The family album expresses the essence of social memory. There is nothing more unlike the introspective 'search for lost time' than those displays of family photographs with their commentaries, the ritual of integration that the family makes its new members undergo" (Bourdieu, 1990). The family is seen as an image hunter that can talk about itself, forget about itself, reminisce with itself, and identify with itself: *"Taking pictures is like taking notes a little bit, trying at the same time to remember, and giving a license to forget. It is a process of mental hygiene"* (Bourdieu, 2003).[8]

8 Translated by the author

This concept has the power that psychoanalysis applies to understanding phenomena as manifestations not only of the positive, but also the reverse: "Album stories are wishes with a sometimes contrary and perverse logic of manifesting (…) the album constructs a visual memory, but also the contrary: oblivion" (Silva, 1998)[9] to the extent that the evidence is cut, leaving a section of the photographic story. If it is said that photography solemnizes what is solemn, then what is not solemn, what is the family hiding, what constitutes the non-familiar, the non-ritual?

> *"What happens is that in sad moments pictures are generally not taken because the sorrow is so great that it does not have a place; even having a camera in the pocket, such a trauma, the issue… that you do not even think of taking a photo."*

These are the words of Mrs. Martha when asked whether she would place a sad picture on her bedside table. This fact urges thinking about the idea that the photo album is closer to a book in which is rewritten an institutional history, full of happy, funny and pleasant tales which aims to create a positive vision of the family, saved as one of the cultural referents, a place where comedy is rewritten. Aristotle in his *poetics* – as quoted by Silva – says: "The risible is a defect and an ugliness with no pain or harm; thus, for example: the comic mask is ugly and deformed, but with no expression of pain" (Silva, 1998).[10] However, a grimace may be similar to laughter (and vice versa), and with this we understand that the nature of the tales in photography are far from being tragedies, in the literary sense of course, because dialectically they are *comedy*, and an album filled with this matter is used to reorganize the past as the intentional speech of the good, of the morally acceptable, of what makes us laugh, as mere mockery of what was "ours" in a bygone age.

When Mrs. Martha is asked about whether photography works for *"watching the time pass,"* she says:

> *"Now we mock ourselves: when we were young, we dressed rock and roll without understanding that that time was a particular age, but now it is mocked."*

This historical character can be seen when looking at family photography that contains images of many predecessor generations (as in the case of Bolívar-

9 Translated by the author.

10 Translated by the author.

Guzman, which is a typical Latin-American family) in which unintentionally appear historical trends, ways of dressing according to the type of music that was listened to, ways of showing oneself in images. Obviously, these objects, modes and ways of identifying with one or another thing at the same time are reflected, proving the cultural past of some inserted characters in a social logic of identity, showing them as part of an era that welcomed them.

It is clear that the album preserves images, objects or parts of the body that evoke memories, and in relation to that uncertainty – due to the irreversibility of time, old age and imminence of death – memories have a function in maintaining cohesion in a group around an institutional discourse, images that connote the cultural forms of a group located in context. But there are also *everyday situations* that are inconceivable to the familiar shutter and the subsequent file: there are some acts that people want to be forgotten: thus what is revealed is a reflection of what is not shown… the negative of the film.

This is why the family revealed in photography must be willing to reflect what is morally acceptable; it must construct images from socially acceptable ways and manners, from popular aesthetic rules, from poses and functional themes that are the *normal* photographic themes of albums and paintings that are consistent with their institutional condition and value the state that makes them possible.

A popular adage preaches that "*The only sure thing we have in this life is death*," and photography, in the words of Castel: *"is the representation of an absent object as absent,"* not necessarily in the sense of those who have died and still remain visible in the pictures, but also in the intention of keeping images in a present that is dying second by second, that is escaping at such a speed, that must be set in past time, because photography, first of all, is set in past time, and reveals what has melted away in days, the death of days, and which – photography – has been consolidated as the privileged instrument of social memory, conserving the force of reviving indissolubly the memory of the disappeared, of their imminent fading in time. It is about remembering that at some moment they were alive, but reaffirming that they are now dead and buried. Of which Mrs. Martha comments:

> *"You take the picture without thinking... and when you realize, you see that a long time has passed: this picture was taken thirty years ago! But without intending it, life and time are passing by, and the picture precisely appears to remind us that time has passed: let's say, my little girl was one year old, and now she is twenty-two. Time passes unceasingly."*

When Martha is asked about whether photography only works for solemn moments, she says:

> *"...not solemn at all, they could be quotidian, because at any moment somebody is beautiful and a picture can be taken, even if it is not a party; but no sorrows, not even in those moments do we think of photography. The human condition does not allow photographs like that, let's say, of a dead person."*

On this point, Bourdieu claims that popular photography provides a means of making solid realities perceptible and showing them in their temporal valuation; in other words, what is shown in familiar photography is not necessarily a practical de facto fact, but is the action made past, made time, while the picture acquires its importance as long as it is evocative and possesses the social signification that identifies and is located in time. This is why, when a photo album is shown, the person who observes it is transported to a familiar past time, as long as the pictures that they see – and hear about – have context, both for the one who shows, and for the one who observes, that makes each picture part of a whole. Then, the entire album has a literary overtone and is a temporal expression.

Talk of oblivion and memory, an unwavering dialectic relationship, motivates the introduction of the variable of time, the time of photography, into the discussion. One of the peak conditions of photography is that part of the literary and narrative expressivity of a picture tells us correctly that *this is how it has been* – "*a record of what is not anymore*" (Silva, 1998)[11] – and this particularity makes it received in the family as the truest and credible technique for telling tales about a group: "Being past, it constitutes an authentic proof of reality" (Silva, 1998).[12] Images from the past acquire enough force to say what is considered to be "*truth*." In conclusion, Castel delights us with the following affirmation: "*Photography (...) organizes temporality actively, takes rational precautions against the escape of time, conserving their prints. When it goes back to the expired past, that makes it nostalgic contemplation, thus it is a record equivalent to that of poetic elegy*" (Bourdieu, 2003).[13]

In the interview with Mrs. Martha in her apartment in the city of Bogotá, a delicate topic was broached: the death, some years ago, of one of her children, linked to the pictures that portrayed him. When those pictures appeared in front of her eyes, with tears appearing and breaking voice, she said:

11 Translated by the author.

12 Translated by the author.

13 Translated by the author.

> *"The family always remembers him. Ay! Julián would say this! Then loving or not loving him is so sad, but he is always present, even whether he is only in the pictures or in the sayings. Moreover, when we see the little grandson (his son) we also remember him."*

"The Photograph always carries its referent with itself, both affected by the same amorous or funereal immobility, at the very heart of the moving world: they are glued together, limb by limb, like the condemned man and the corpse in certain tortures" (Barthes, 1981). It is its nature and curse that the image of the referent remains for a long time in the picture, intact, immobile, with some luck, in like reflection and likeness, as a double of it-has-been and a condemnation of the one who looks at THE picture.

"By attesting that the object has been real, the photograph surreptitiously induces belief that it is alive, because of that delusion which makes us attribute to Reality an absolutely superior, somehow eternal value; but by shifting this reality to the past ("this-has-been"), the photograph suggests that it is already dead" (Barthes, 1981). The strength of photography is when it involves the revelation of a loved being who has disappeared and is maintained thanks to its connotative matter; that is, what it refers to. That is why, according to Barthes, a photo does not contain signs because it is analogous to reality, but because it lives to refer and to connote the world and hence is able to move, to open up the dimension of memory and irreversible time, provoking a mixture of pleasure and pain, as if looking at a photo of a being or significant situation activates the switch of nostalgia.

In order to illustrate this fact I recall a visit I made to a friend's family house in Bogotá, Colombia. My friend Alejandra (one of the family's daughters) showed me some pictures from the parents' marriage in the personal drawer of her parents that had been taken from the family photo album. The couple was going through a difficult period of separation, and the pictures had something similar about them: whenever the woman appeared, she had been scratched out with a pen – her body, her pose, her clothing, her happiness with the father. From all of those images where the couple were together, she was the only one who was made to disappear. Death, love and distance, melancholy. What motivates Barthes to write *Camera Lucida* is precisely the recent death of his mother and his desire to reclaim her. It is there, in front of her picture, that he reflects:

> *Every photograph is somehow co-natural with its referent, (...) overwhelmed by the truth of the image (...) I call 'photographic referent' not the optionally real thing to which an image or a sign refers but the necessarily real thing which has been placed before the lens, without*

which there would be no photograph. (...) In Photography I can never deny that the things has been there. There is a superimposition here: of reality and of the past." (Barthes, 1981)

There at some moment was a ritual moment, the happiness about a marriage, for the communion and foundation of a family endorsed by religion and the state, being told by photography, and now there is also suffering due to a lack of love and household defragmentation. Should we also resort to defragmenting part of the visual record (isolate these pictures from the album), as well as erasing, crossing out one of the characters that comprised this critical family juncture?

CONCLUSION: PHOTOGRAPHY, BETWEEN STORY AND HISTORY

At this juncture the point must be raised that the tale, by being a tale, is fed by some fictional matter, and is thus closer to a literary expression than a historical one. However, it also contains a historic part – because what is historic? Barthes himself wondered about this, saying: *"Is History not simply that time when we were not born (...) History is hysterical: it is constituted only if we consider it, only if we look at it"* (Barthes, 1981). History understood as a tale comprised of facts from the past, facts passed through the filter of a tale, of a pen, of a lens or a human carving, necessarily passes through subjectivity encased in objectivity. It is because of this that it can be said that a family history is constructed in a photo album only if history is understood as a tale that does not differ from being a literary work; that is to say, it is narratively assisted to highlight certain things, expand some others, frame the best, and ignore the obtuse.

However, it is necessary to differentiate between *narration*, *tale,* and *history.* In terms of *narrative* it should be said that this is the matter which *tale* is made from, while in terms of actors, the *narrator* is he who constructs a speech – being fictional, which tends to be realistic or poetical – *inside* the picture, *inside* the album, and a *virtual* instance, in Silva's terms: meanwhile, a *tale* is what is detached from the narrative, a *rapporteur* is he who talks *about* pictures or the album, tells a story with the narrative resources with which albums are made, constituting himself as a *pragmatic* being. From this perspective, a *family* would be the *collective narrator* of its own history and the *rapporteur* would be the *person* from the family – who, finding this technique significant for them and for the group – is capable of telling the album's history, making it verbal speech for others, and also of being able to make reflective the importance of this practice to family life.

Each institution that has adopted photography as its modus operandi has its unique story, its way of representing itself and the speeches that sustain and reproduce. To exemplify, police photography is linked directly to the criminological and juridical institutions that monitor, control, punish, and verify, while journalistic photography deals with the stories of documentation, segmentation and sensationalism from media that favor certain discourses. Furthermore, advertising photography deals with mass consumption and industry, whereas art photography projects the cultural elite, intellectually sterile and politically conservative. And… family photography?

Here we should ask ourselves, what has happened with the photo album? Where is that album now? How do we see ourselves, and want to see ourselves, in the photos that millions of individuals can see from behind their screens?

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FORUM

MINIMUM INCOME PROTECTION SCHEMES IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

Zsolt Temesváry[1]

ABSTRACT *This paper aims to introduce the characteristics of minimum income protection schemes in Poland, Hungary, Slovakia and the Czech Republic. Minimum social incomes incorporate all non-contributory, mostly means-tested social allowances, family supports and housing benefits which are available even to the poorest layers of society. The study first introduces the structure of minimum social protection systems in the selected countries, then assesses the amount of the related social transfers regarding three household types – single adult households, as well as single- and two-parent households with two children aged 7 and 14 years – showing the maximum amount of subsidies these households can receive. The categorization of households and social transfers was based on the 2013 SAMIP (Social Assistance and Minimum Income Protection Interim) dataset, which was revised for the 2016 MISSOC database to incorporate the newest social allowances that have been introduced since 2013 (e.g. Family 500+ in Poland and some provisions of the 2014 Hungarian welfare reform).*

KEYWORDS: *social allowances, social policy, poverty alleviation, minimum income, Central and Eastern Europe, welfare transfers*

INTRODUCTION

The so-called social states (Dallinger 2016), featuring the Central and Eastern European (CEE) countries, cannot be compared to the traditional Western European and North American welfare state models identified by Esping-Andersen (1990). Due to the historical and social development of the

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CEE countries over the last century, the fundamental characteristics of their social policies significantly differ from the practices in Western European states (Tomka 2015). Kornai (2012) calls the Central and Eastern European countries *premature welfare states,* referring to the fact that although the basic institutions of welfare were also established in these countries, they were only moderately able to satisfy the social needs of people. Inglot (2008) describes the social states of the CEE countries as *emergency welfare states,* referring to the ad-hoc social policy interventions, a lack of predictability and strategic planning, and the poorly financed social security systems that characterize the social policies of Slovakia, Hungary, Poland and the Czech Republic.

Tomka (2015: 152) states that the contemporary social policy schemes in the CEE countries can be considered *hybrid* welfare models because of the region's special historical development. Before the Second World War, the Central and Eastern European countries maintained conservative welfare institutions, including a modern social security system for industrial workers, well-developed family policy strategies, and also a basic allowance system for the poorest groups. State-run welfare institutions were supplemented by additional private services, particularly in the area of health care and pension systems. During the four decades of communism these strong conservative pillars of social security were abolished and substituted by a soviet-like state-socialist welfare model. *Bismarckian* social security systems were terminated in all the socialist countries, which led to the elimination of thriving public pension funds. At the same time, the existence of poverty was denied for ideological reasons, which finally led to the elimination of social allowances. Nonetheless, one can also identify positive social policy reforms in the CEE countries in the state-socialist era. Basic medical services and pensions were extended to the formerly discriminated agricultural population. Some countries introduced generous and widespread early childhood development services and benefits for poor families. After the fall of the Soviet Union, crucial political and economic transitions (Ferge 2000; Inglot 2008) swept through the region and the World Bank provided loans to Central and Eastern European countries to alleviate the social crisis that escalated after the economic changes (Deacon et al. 2009). The World Bank often required the reform of social protection systems as a prerequisite for financial support (Rose and Mackenzie 1991; Ferge 2000; Deacon et al. 2009). These externally forced social policy reforms particularly affected pension systems and family benefits. For example, in the case of Hungary family-policy-related expenditures ran to 4 percent of GDP directly before the transition in the late 1980s. In the early 1990s, family and child-related expenditure had been reduced to 2 percent of GDP, leading – in

practice – to the closure of kindergartens and day-nurseries, and a significant reduction in the purchasing power of family benefits. Despite the decades of state-socialist social policy and direct neo-liberal influence thereafter, the CEE countries rediscovered their conservative social policy roots relatively quickly and re-institutionalized more or less the same traditional social security-based welfare models that had prevailed in the post-war period (Inglot 2008).

The contemporary social states of CEE countries are doubtlessly based on the pre-war *Bismarckian* social security systems which were introduced relatively early in the region, directly after the German-speaking countries (Haggard – Kaufman 2008; Nyilas 2008). As a result, in most cases social security systems provide appropriate services and benefits in the case of unemployment, maternity, old age, disability, or accidents at work (Zombori 1994). Traditional social security systems are always supplemented by income-related, in-cash allowances which can reach even those layers of society that are not eligible for contributory social security services, or whose eligibility for these social benefits has expired.

After the 2008 economic crisis that swept through the entire region, public thinking about the direction, goals and magnitude of welfare services and support changed radically in each country. Similar to their Western European counterparts, Eastern European countries also introduced so-called workfare-related social policy measures and deliberately reshaped their underdeveloped welfare services and transfers. Leaders in Hungary, Slovakia and Poland openly rejected western-type welfare states and stressed the importance of so-called work-based societies and activating welfare policies.

Although the basic features of work-based societies can be found in Thatcherian activating workfare policies (Simonyi 2012), the source of this kind of new social welfare paradigm originates in the neoliberal and neoconservative welfare reforms of the Anglo-Saxon countries. These reforms began with the introduction of the 1996 *Personal Responsibility and Work Opportunity Act* in the USA, and involved new policies sweeping across the world (Midgley 2008). These new reform concepts puts less emphasis on the social responsibility of the state towards the well-being of individuals and social groups, and highlighted the importance of self-sufficiency. The primary goal of modern social assistance systems is to re-direct beneficiaries away from passive welfare transfers towards the world of employment through targeted social policy interventions.

As a result of this new approach to welfare, the amount of income-dependent social benefits has been drastically decreased, particularly in Hungary and Poland. Social and family allowances have been tied to different behavioral conditions – such as the schooling of children in Slovakia and Hungary – besides the former means-tests. Not only have the conditions of eligibility been

significantly changed, but also the structure of available transfers. Formerly free-to-use, in-cash transfers have been gradually turned into targeted allowances only available based on the presence of children, for housing/heating, or for job-seeking purposes (Medgyesi – Scharle 2012).

Since contributory social security systems represent the foundations of welfare in work-based societies, allowance systems usually provide only poor-level transfers, the value of which is less not only than the wages available on the labor market, but also social security benefits. As a result, one can identify a two-level structure in the area of social transfers. On the one hand, social security benefits provide a quite decent standard of living for the wealthier layers of society. On the other hand, poor people without social insurance are eligible only for low-level, means-tested social allowances (Ferge 2000). In their current form, the welfare systems of the CEE countries are more similar to the social policies of the pre-war *Bismarckian* conservative social states such as Germany and Austria than modern continental welfare states.

This *paleo-conservativism* (Ferge 2006: 59) can be seen particularly in four areas of welfare. All the CEE countries put significant emphasis on the principle of *less eligibility* (Zombori 1994: 122) and deliberately keep the amount of social allowances very low to motivate poor people to work and deter them from claiming allowances. The message hidden behind the distribution of poor-level allowances is that no one should receive more money from social transfers than from work-related income. Another important welfare principle in the CEE countries is the *principle of subsidiarity* (Zombori 1994: 118). This means that the state intervenes in the lives of families and individuals only when it is particularly necessary and unavoidable. Otherwise, individuals, families and small communities are responsible for their own well-being, including the financial and emotional support of family members in need and care for elderly people and children. Unemployment services are dominated by so-called activating policies (Simonyi 2012) which require compulsory cooperation with job centers and participation in mandatory workfare programs. For example, poor people can easily lose their eligibility to social allowances in Hungary if they do not undertake at least 30 days of public work a year. In the field of family benefits, working parents can obtain a much higher social income through social security benefits and the generous tax systems than poor parents who generally only receive means-tested child-related allowances.

SOCIAL ALLOWANCES IN THE CEE COUNTRIES

It is important to highlight that although the regular housing and child-related social allowances introduced below serve as the foundation of the analyzed social welfare systems, they are not the only source of income poor people can rely on. These basic allowances are available to all those (including the poorest) who belong to the given risk groups, but beneficiaries may also be eligible for those additional transfers for which they meet conditions of eligibility (e.g. willingness to search for a job).

Poland

Social allowances in Poland are non-contributory benefits for people in need that incorporate various in-cash and in-kind transfers. Families and individuals whose monthly income is below the income threshold are eligible for the allowances. In certain cases, in-cash allowances can be combined with some social security benefits (e.g. pensions and unemployment benefits).

People with low income or a reduced capacity to work because of their age or disability are eligible for a *Regular Social Allowance* (*Zasiłek Stały).* The income threshold of the transfer is 634 PLN (150 EUR) per capita for single-adult households and 514 PLN (121 EUR) for families. Elderly people ineligible for a social security-based pension and people unable to work because of disability or permanent illness can also receive the standard allowance if the social security agency verifies their eligibility. The amount of benefit depends on the number of family members and the income of the household, but must be within the range of 30 PLN (6.66 EUR) to 604 PLN (142 EUR) a month. A *Regular Social Allowance* can also be provided to unemployed persons whose social security-based unemployment benefit has expired.[2]

Social assistance centers can provide *Temporary Allowance* (*Zasiłek Okresowy*) for poor people without any income, or for those whose income is below the poverty threshold and do not have enough cash assets to take care of their families. The target group for the *Temporary Allowance* is unemployed people without social security benefits and people with serious disabilities. *Temporary Allowance* can be combined with other contributory social security benefits, but the amount of these benefits is deducted from the transfer. The

2 http://www.infor.pl/prawo/pomoc-spoleczna/zasilki/321338,Kiedy-przysluguje-zasilek-staly.html (accessed 3 January, 2017)

primary goal of the *Temporary Allowance* is to secure the minimum living costs for people in need during times of unemployment, disability, or illness. The amount of the allowance is the difference between the legally declared maximum value of the benefit and the actual income of beneficiaries, but cannot be less than 20 EUR or more than 418 PLN (99 EUR). Beneficiaries are allowed to apply for temporary allowances only once every two years. If an employer employs a *Temporary Allowance* beneficiary, the employee can keep the allowance in the first two months of employment. This option makes the transition between unemployment and employment easier and provides extra money for poor people so they are able to cover increased costs, such as those of traveling and clothing, in the first period of employment. Authorities assess eligibility for the allowance as well as the amount of the transfer on a case-by-case basis. After the expiration of the two-year support period, beneficiaries can re-apply for the allowance if there has been no improvement in the household's financial situation (MISSOC 2016).

The *Special Social Allowance* (*Zasiłek specjalny*) can be transferred to families and individuals whose social needs are caused by special life circumstances such as sudden illness, natural disaster or the death of a family member. The *Special Allowance* is a lump-sum transfer always determined on a case-by-case basis. A targeted form of *Special Allowance* is available for homeless people to help them cover the costs of their medical care. Eligibility for the *Special Allowance* is evaluated by local municipalities and depends on applicants' financial conditions.[3] The income threshold for the *Special Allowance* is 634 PLN (140.89 EUR) for single households and 514 PLN (114.22 EUR) for families.[4]

The most important family-related allowance of Polish social policy is the *Family Allowance* (*Zasiłek rodzinny*) which covers more than two million children in the country. The *Family Allowance* is paid until the child's eighteenth birthday, or longer if they attend school or have a disability. The amount of the *Family Allowance* depends on the child's age. A young child under the age of five can receive 95 PLN (21.11 EUR), a child aged 5-18 years 118 PLN (26.22 EUR), while young people aged 19-23 years can get 129 PLN (28.67 EUR).[5] The Polish government introduced the "*Zloty for zloty*" program in 2017 that also enabled low-income families earning a little above the income threshold to receive the *Family Allowance*. According to the reform, families whose monthly income is higher than the income threshold of the *Family Allowance* – at least by 20 PLN

3 http://ops.pl/2016/04/kiedy-i-komu-przysluguje-zasilek-celowy/ (accessed 12 January, 2017)

4 http://www.mops.pila.pl/swiadczenia.html (accessed 12 January, 2017)

5 http://www.mpips.gov.pl/aktualnosci-wszystkie/art,5538,7217,wyzsze-swiadczenia-rodzinne-i-progi-dochodowe.html?serwis=1 (accessed 11 December, 2016)

(4.72 EUR) – can receive a partial transfer. In this case, the full amount of the allowance is reduced by the difference between the family's income and the official income threshold of the *Family Allowance*. The official income threshold of the transfer is 674 PLN (159 EUR) per capita or 764 PLN (180 EUR) in the case of a disabled child (MISSOC 2016).

A new element of the Polish family policy is the so-called *Family 500+* (*Rodzina 500+*) program. All families raising two or more children, as well as poor families with one child, are eligible for the benefit. The goal of the allowance is to support childbearing, to reduce the financial burdens of large families, and to support poor families with children directly. The introduction of the transfer is underpinned by the fact that Poland has the lowest fertility rate in the EU (1.3 children per woman) and that the poverty rate of families with more than three children is twice as high (36 percent) as the average poverty rate in the country. The amount of the transfer is 500 PLN (114 EUR) which all families with two or more children are eligible for, and even one-child families are eligible if their monthly income is less than 800 PLN (182 EUR) per capita. Family 500+ is paid until the eighteenth birthday of the child. The program is maintained by local municipalities which can also pay it in-kind where appropriate. According to the calculations of the Polish government, the yearly cost of the program is approximately five million euros, and the number of participants is 3.7 million (Sowa 2016: 2).

A *Supplement for Raising a Child Alone* is a transfer for single mothers or fathers who cannot rely on any financial support from their partner due to their death or related financial problems.[6] The amount of the transfer is 185 PLN (42 EUR) per child, but cannot exceed 370 PLN (84 EUR) per family (MISSOC 2016). The monthly income threshold of the supplement is 725 PLN (171 EUR) per capita.

Czech Republic

In the Czech Republic, the entire system of social allowances belongs to a unified state-run welfare program called *Social Assistance in Material Need* (SAMN, *Systém pomoci v hmotné nouzi*). This large program incorporates three forms of in-cash benefits: *Allowance for Living (Prispevek na živobyti), Supplement for Housing (Doplatek na bydlení)* and *Extraordinary Immediate*

6 http://www.infor.pl/prawo/zasilki/zasilek-rodzinny/276615,Kto-moze-otrzymac-dodatek-z-tytulu-samotnego-wychowania-dziecka.html (accessed 11 December, 2016)

Assistance (*Mimořádná okamžitá pomoc).* All social allowances included in this system are means-tested, non-contributory and maintained by the regional labor offices. Poor people participating in the SAMN program must prove their willingness to work, so they are required to register at the labor offices as job-seekers, accept any kind of jobs, and participate in alternative projects such as public work, training, and counselling (European Commission 2013a: 27).

People who are unable to maintain their living conditions on their own are eligible for the *Living Allowance*. The allowance provides support for everyday necessities such as food, clothes and traveling, excluding housing-related expenditures. The amount of the allowance depends on the income level and other social conditions of beneficiaries. The Czech government has introduced an indicator called *Living- and Subsistence Minimum* (*Zákon o životním a existenčním minimu*) which determines the income eligibility of the *Living Allowance* and other social transfers. The amount of the *Living and Subsistence Minimum* is 3410 CZK (126 EUR) for a single-adult household, an additional 3140 CZK (116 EUR) for a second adult, an additional 2830 CZK (105 EUR) for a child, and 1740 CZK (64 EUR) for children under six years of age. Since the amount of the *Living Allowance* depends on family status, the number of family members and the economic condition of the region where the family lives, calculation of the exact provision is quite difficult. The amount of the *Living Allowance* is, for instance, 3410 CZK (136.4 EUR) for a single-person household in Prague, while a *two-parents-and-two-child* household living in the countryside receives 9850 CZK (378 EUR), from which family allowances are deducted.[7]

A *Housing Allowance* (*Doplatek na bydlení*) is provided to individuals and families who are unable to maintain their household without the governmental rent- and overhead subsidy. The amount of the transfer is calculated so as to fill the gap between *Justified Housing Costs* and the real income of the family that can be applied towards housing purposes. *Justified Housing Costs* are legally determined and include rental- and overhead costs as well as some other housing-related regular expenditures. Households for whom 30 percent of their net monthly income is not enough to cover the *Justified Housing Costs* calculated for the given household-type are eligible for the housing subsidy. Calculation of *Housing Allowance* considers the number of household members, the economic characteristics of the village or town where the apartment can be found, as well as the property relations (owned or rented apartment). The amount of the *Housing Allowance* is – for example – 3600 CZK (144 EUR) in the case of a two-person household in Prague where a couple pays 4500 CZK

7 http://www.penize.cz/kalkulacky/prispevek-na-zivobyti#prisZiv (accessed 07 January, 2017)

(167 EUR) for the apartment in the form of rent and/or overheads, and whose monthly income is 20000 CZK (740 EUR).[8]

The third pillar of the Czech social allowance system is *Extraordinary Immediate Assistance,* which is provided by local municipalities to alleviate temporary financial problems. The calculation of the allowance is always based on individual life situations and is not predefined (MISSOC 2016).

Child Allowance (*Přídavek na dítě*) is available for families raising at least one child under the age of 15 years. The supporting period of *Child Allowance* can be extended to the twenty-sixth birthday of the child if they attend school or have serious medical problems. Families whose income is less than 240 percent of the *Living- and Subsistence Minimum* are eligible for *Child Allowance*. The amount of this allowance is 500 CZK (19 EUR) for children under six years of age, 610 CZK (23 EUR) for children aged 6-15 years, and 700 CZK (27 EUR) for children aged 15-26 years. The allowance is paid to the parents until the child's eighteenth birthday. After coming of age, young adults can directly receive the transfer.

Slovakia

In the Slovak Republic, the system of social allowances belongs to the national *Labor, Social Affairs and Family Office* whose regional agencies are responsible for the assessment of eligibility and the payment of allowances. Temporary assistance provisions are organized and financed by local municipalities (European Commission 2013b: 35). Similar to the Czech Republic, the Slovak social assistance system also applies a so-called *Subsistence Minimum* (Životné minimum) to determine eligibility for social allowances. The amount of the *Subsistence Minimum* expresses the basic costs of living that are generally accepted in Slovak society, so it includes one warm meal per day as well as basic clothing and housing costs (MISSOC 2016). The amount of the *Subsistence Minimum* is 198.9 EUR for a single-person household, 138.19 EUR for each additional adult and 90.42 EUR for children under the age of eighteen.[9]

The Slovak social assistance system incorporates three categories of welfare transfers. The most important one is *Assistance in Material Need* (*Pomoc v*

8 http://www.penize.cz/davky-v-hmotne-nouzi/309216-doplatek-na-bydleni-2016-pravidla-a-vypocet (accessed 05 January, 2017)

9 https://www.podnikajte.sk/dane-a-uctovnictvo/c/2710/category/dane-a-uctovnictvo/article/suma-zivotneho-minima-2016-2017.xhtml (accessed 20 December, 2016)

hmotnej núdzi), a regular form of social support available to all persons and families in need. The second category of the allowance system is a needs-based welfare package that incorporates various smaller in-cash transfers such as *Protecting Allowance* (*Ochranný príspevok*), *Activation Allowance* (*Aktivačný príspevok*), *Housing Benefit* (*Príspevok na bývanie*) and *Allowance for a Dependent Child* (*Príspevok na nezaopatrené dieťa*). Eligibility to these special allowances always depends on the living conditions of families such as the number of children and/or disabled or seriously ill persons in the family, housing conditions, and the adult's job-seeking activity. The third pillar of the allowance system is a lump-sum, one-off benefit (*Jednorazová dávka*) provided by local municipalities only in the case of special needs.

Assistance in Material Need is available for individuals and families whose monthly income is lower than the amount of subsistence minimum. The amount of this allowance depends on the size of the family. *Assistance in Material Need* is a supplementary social transfer that supplements the monthly income of poor households up to a ceiling determined in the social act. Thus, the actual amount is the difference between the transfer's official maximum level and the aggregated net income of the family. The highest possible amount of *Assistance in Material Need* is 61.60 EUR for one-person households, 117.20 for single-parent households with 1-4 children, 107.1 EUR for a couple without children, 160.4 EUR for a couple with 1-4 children, 171.2 EUR for single parents with more than five children, and 216.1 EUR for couples with more than five children.[10] The period of support of the benefit is not limited; it is paid as long as the household is eligible (MISSOC 2016).

Assistance in Material Need is supplemented by other special needs-based social transfers, two of which belong to the category of guaranteed minimum resources that this paper examines. The *Allowance for a Dependent Child* is transferred to poor families earning under the subsistence minimum whose children (aged 6-16) attend public education. The amount of the allowance is 17.2 EUR per child.[11] A *Housing Allowance* is available to households – without any overhead or rent-related debt – for whom the payment of housing costs causes problems. In addition, beneficiaries must have a long-term rental agreement or must be the owners of the property. The amount of the *Housing Allowance* is 55.8 EUR for a single-person household and 89.20 EUR for a household with two or more members. The *Protecting Allowance* is a social transfer available for the

10 https://www.employment.gov.sk/sk/rodina-socialna-pomoc/hmotna-nudza/vyska-pomoci-hmotnej-nudzi/davka-hmotnej-nudzi.html (accessed 5 January, 2017)

11 https://www.employment.gov.sk/sk/rodina-socialna-pomoc/hmotna-nudza/davky-hmotnej-nudzi/prispevok-byvanie/ (accessed 10 January, 2017)

most vulnerable social groups, such as elderly people without pension eligibility, people with reduced capacity to work and single mothers raising infants. The amount of the transfer varies between 13.5 EUR (for single mothers) and 63.7 EUR (for the elderly without pension) according to the special needs of the risk group. The lump-sum *Special Benefit* is maintained by local municipalities and provided to families or individuals in threatening living situations. The exact amount of this *Special Allowance* is regulated in local decrees, but cannot be higher than 300 percent of the subsistence minimum (596.7 EUR).[12]

The most important minimum income resource for poor families with children is *Child Benefit* (*Prídavok na dieťa*), which is a regular non-contributory monthly transfer. The amount of the *Child Benefit* is 23.52 EUR per child. Unemployed parents participating in job-seeking activities such as public work, counselling or education receive a higher amount of benefit (54 EUR for the first and 42 EUR for additional children) during periods of active job-seeking. If grandparents are the guardians of a child, they receive an additional 11.3 EUR per month. *Child Benefit* is paid until the end of compulsory education, until the age of sixteen. The supporting period can be extended until the twenty-fifth birthday of the child if they attend school, are disabled or seriously ill.[13]

Hungary

The system of social allowances was fundamentally reformed in Hungary in 2014. As a result of the country's social policy reform, the majority of social allowances were delegated from local municipalities to micro regions. Former elements of the allowance system such as the *Housing Allowance*, *Temporary Allowance* and *Debt Management Services* have been entirely eliminated or re-organized under new names. The government's aim behind the welfare reform was to orient poor people away from passive welfare transfers towards active workfare services. The most important such workfare service is the public work program that gives work to almost 350 000 poor people in Hungary and thus provides them with a higher standard of living compared to that which they would have being unemployed and living solely from social allowances. Through participation in public work

12 https://www.employment.gov.sk/sk/rodina-socialna-pomoc/hmotna-nudza/davky-hmotnej-nudzi/jednorazova-davka-hmotnej-nudzi/ (accessed 10 January, 2017)

13 https://www.employment.gov.sk/sk/rodina-socialna-pomoc/podpora-rodinam-detmi/penazna-pomoc/pridavok-dieta/ (accessed 13 January, 2017)

programs, people can receive twice as much income as they would living from social allowances (Mód et al. 2016: 56). Only those people are eligible for the means-tested social allowances who demonstrate a willingness to work, participate in job-seeking activities, or are otherwise unable to maintain a basic standard of living (Mózer et al. 2015).

Benefit for Persons of Active Age (*aktív korúak ellátása*) is a non-contributory social allowance financed from the state budget. The transfer is available to unemployed people without social security-related benefits, to people with reduced capacity to work, and to people living with a serious disability. The income requirement associated with the transfer is that the monthly income of beneficiaries cannot be higher than 90 percent of the pension minimum. Only one adult person per household can receive the allowance, and all beneficiaries must cooperate with the labor and rehabilitation authorities. *Benefit for Persons of Active Age* has two elements: *Benefit for People Suffering from Health Problems or Taking Care of a Child* (*egészségkárosodási és gyermekfelügyeleti támogatás*), and *Employment Substituting Benefit* (*foglalkoztatást helyettesítő támogatás*). The first transfer is available to households caring for a disabled family member, as well as for parents raising a child under the age of 14 years and unable to secure the day-care of the child.[14] The maximum amount of the benefit is 90 percent of the public workers' wage (161.2 EUR). The monthly average number of beneficiaries was 160 858 and the yearly cost of the transfer totaled 44 billion HUF (145.2 million EUR) in 2014 (KSH 2015). *Employment Substituting Benefit* is available to able-bodied, active-age and unemployed people living in poverty. The amount of transfer is 80 per cent of the pension minimum (22 800 HUF, 75.24 EUR). Beneficiaries are required to participate in the public work program of the government or other job-related activities (e.g. voluntary work) for at least 30 days a year and cooperate with the regional labor offices.

People with special and immediate needs can receive *Local Benefit* (*települési támogatás*) which is controlled and provided by municipalities. The national social act determines only the general frameworks of *Local Benefit* so municipalities reserve the right to specify the conditions of eligibility in their own decrees. According to the social act, *Local Benefit* can be given in the case of housing-related problems, to support schooling, and to contribute to the medical costs of ill or disabled people. The amount of local benefits cannot be higher than the pension minimum (28 500 HUF, 94.05 EUR).

Family Allowance (*családi pótlék*) is a non-means-tested transfer available to all families raising children in Hungary. Family allowance is the most

14 http://net.jogtar.hu/jr/gen/hjegy_doc.cgi?docid=99300003.TV (accessed 13 January, 2017)

important income source for poor families. It makes up 25 percent of single parent households' income, and 15 percent of two-parent households' income on average (Kovács – Pillók 2014). Family allowance includes two elements: *Child Raising Allowance* (*gyermeknevelési támogatás*) for children aged 0-6 years and *Schooling Allowance* (*iskoláztatási támogatás*) for children aged 6-16 years. *Family Allowance* is available up to the age of 20 if the child continues full-time education, or to the age of 23 if the child has special needs. The amount of the allowance varies according to the number and health status of children as well as the family status of parents. The basic amount of *Family Allowance* is 12 200 HUF (40.26 EUR) for a single child, 13 300 HUF (43.89 EUR) for two, and 16 000 HUF (52.8 EUR) for three or more children. Single parents and parents raising seriously ill or disabled children can receive a higher amount, up to 25 900 HUF (85.47 EUR) per child. Households receiving *Family Allowance* are required to take care of the schooling or regular kindergarten attendance of their children. If the child misses more than 50 classes a year, *Schooling Allowance* is suspended for three months. If small children, miss more than 20 days of kindergarten, the notary can temporarily suspend the *Child Raising Allowance*. *Family Allowance* was transferred in support of 1.8 million children (1.1 million families) in 2015 (KSH 2015).

Poor families raising children are also eligible for the *Regular Child Protection Allowance* (*RGYK, rendszeres gyermekvédelmi kedvezmény*). This allowance is available to families whose monthly income per capita is below 140 percent of the minimum pension, while in the case of single parents this proportion is 130 percent. The allowance is provided for the period of compulsory education and can be extended until the twenty-fifth birthday of the child if they attend higher education. The amount of the allowance is 22 percent of the minimum pension (6720 HUF, 20.69 EUR).

VALUE OF THE ANALYZED SOCIAL ALLOWANCES

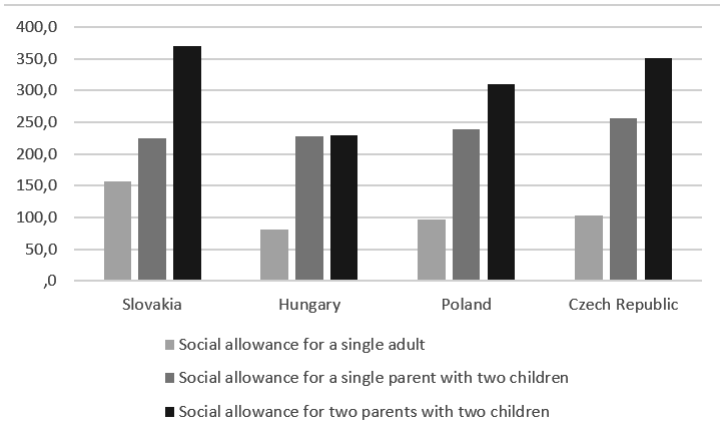
This paper considers those non-contributory and needs-based social transfers as regular in-cash allowances which are basically available to all poor people regardless of the number of years spent at work or the amount of social contribution or tax previously paid to the state. These minimum transfers represent the bottom level of welfare systems, and even the neediest layers of society can benefit from them merely according to their rights as citizens and unfavorable social status. In his "three-storey house" model, Offe (2006: 42-44) describes these minimum in-cash transfers as the imaginary "cellar of the

welfare states," in which those social transfers can be found that provide the possibly lowest but socially still acceptable standard of living for poor people in a given community, and on which the more developed social security benefits and services can be built up.

Regular social allowances are probably the most widespread transfers in the social policies of the CEE countries that are – to some extent – available to all people with income-related poverty, regardless of housing conditions and the number of children, meaning that even childless couples and single households can receive these kinds of support. Naturally, the amount of regular allowances may be higher in the case of families because legislators can acknowledge children as additional consumption units in the household, or through the rights of children adult beneficiaries are classified into another supporting category. For example, in Hungary adults raising children can receive a larger regular social allowance than childless ones, through which the state indirectly acknowledges the augmented burdens of child raising. In this case, the allowance surplus due to the existence of children cannot be separately considered as a family allowance, since it is paid to adults in their own right, not directly after their children. Sometimes it is hard to define which allowances should be classified into the category of regular basic social allowances, and which ones belong rather to family support systems. In general, family support is regulated by family law and social allowances (even if they are child-related) by social law. In more sophisticated social systems, many forms of social allowances are deducted from family allowances, or vice versa, and parents are not eligible to receive duplicate transfers simultaneously both according to their own and their children's rights. Although regular allowances are the basis of all minimum social protection schemes, they can occasionally be supplemented by other "low threshold" welfare transfers such as child allowance and housing allowance.

The diagram below shows that – due to the additional child allowances – all CEE countries provide significantly higher benefits to poor households with children compared to single-adult households. Apart from Slovakia, where the amount of social allowances is higher, the other three countries under analysis provide a more or less similar value of support to single-adult households. Single-parent households can receive more or less the same support in all countries. Slovakia and the Czech Republic provide the most money to *two-parents-and-two-children* households. One can also see from the figure that Hungary gives the least support to all household types in the form of income-supplementing social allowances, and Hungary is also the only country where there is no significant difference between the highest available allowances for *single- and two-parent household* types.

Figure 1 *Minimum amount of regular social allowances in CEE countries in three household types (2016) (EUR)*



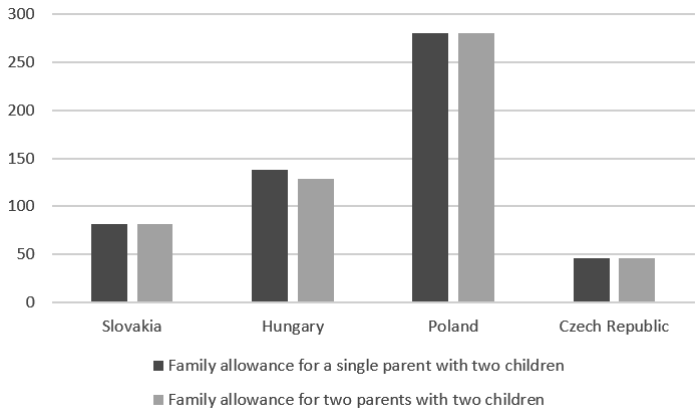
Source: SAMIP (2013) and MISSOC (2016), with the author's corrections

The category of *family allowances* includes all in-cash benefits available to families only due to the rights of children. Thus, this category incorporates all non-contributory child care allowances, child-raising related support, as well as schooling allowances which can be either universal (e.g. in Hungary) or means-tested (e.g. in Slovakia). The majority of family allowances are deducted from the general social allowance in the Czech Republic and Poland if the family is eligible for both types of allowances. Therefore, the original SAMIP database includes a zero value for family benefits in the aggregation of minimum income transfers in the case of these countries to avoid double-counting. To show the real value of these family-related forms of support, I apply this deduction only at the stage of the final aggregation of minimum transfers and show the actual value of family allowances in the graph below. In contrast, the general *Family Allowance* (*családi pótlék*) of Hungary is not counted as deductible income, therefore it represents an income surplus for all families – including poor households – who are raising children. The new *Family 500+* program of Poland significantly increased the amount of family support available to poor households in 2016.

Due to the *Family 500+* program, Polish single- and two-parent households can receive the most money after their children among the countries under analysis. Hungary provides a little more support for single-parent households compared to two-parent families, since the amount of the *Family Allowance* is slightly higher for single parents. The relevance of separated and targeted

family-related support in the Czech and Slovak welfare systems is relatively small since in these countries other benefits – such as housing allowance and regular social allowance – are already calculated on a family basis.

Figure 2 *Amount of family allowances in CEE countries (2016) (EUR)*

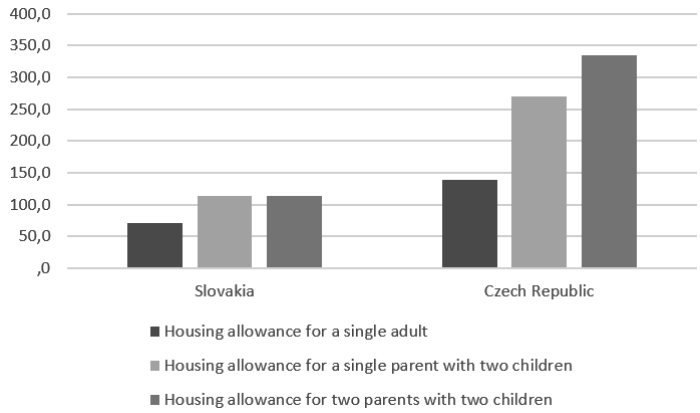


Source: SAMIP (2013) and MISSOC (2016) with the author's corrections

The category of *housing allowances* incorporates the different forms of social support provided for heating, rent and other housing-related expenditures. Only Slovakia and the Czech Republic maintain targeted housing allowance programs, while Poland has never provided direct housing support for people in need. The Polish government rather supports housing indirectly, in the form of targeted family benefits and regular social allowances. Hungary canceled its *Housing Allowance* program in the 2014 welfare reform, and introduced general and universal *Overhead Support* for all citizens, as well as municipality-run *Social Firewood Support,* an in-kind allowance available only to the neediest families.

The amount of *Housing Allowance* is significantly higher in the Czech Republic compared to Slovakia for all household types. The Slovak housing allowance is a fixed-value transfer which is differentiated according to the number of family members. Czech housing support uses a more sophisticated allocation system. In the calculation of the allowance, the income of the family, the number of family members, the regional characteristics of housing, the family status and other factors are equally considered. As a result, the amount of *Housing Allowance* proportionally increases with the number of household members in the Czech Republic.

Figure 3 *Housing allowance in Slovakia and the Czech Republic (2016) (EUR)*

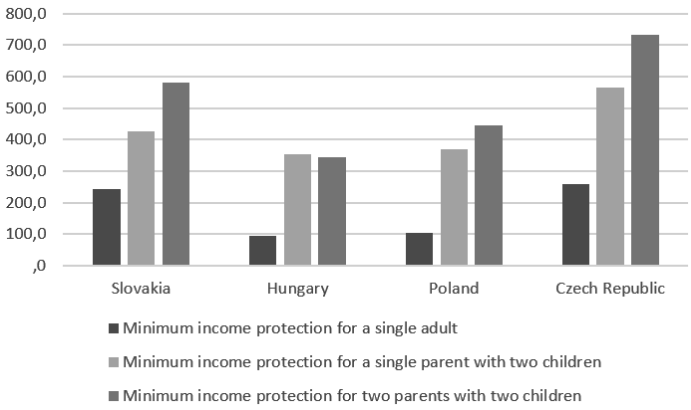


Source: SAMIP (2013) and MISSOC (2016) with the author's corrections

Examination of the aggregated values of the above-detailed social transfers belonging to the minimum income schemes shows that – despite relatively generous family allowances – Poland and Hungary provide significantly lower value transfers to poor families than the other two CEE countries. Due to its generous housing allowance system, the Czech Republic offers the highest level of transfers considering all elements of the national minimum protection schemes. It can also be seen from the graph that Hungary is the only country where there is no real difference between the allowances available to single-parent- and two-parent households, since the general social allowance is available only to one family member. The amount of the Hungarian and Polish social allowance significantly lags behind the benefits available to poor families in Slovakia and the Czech Republic.

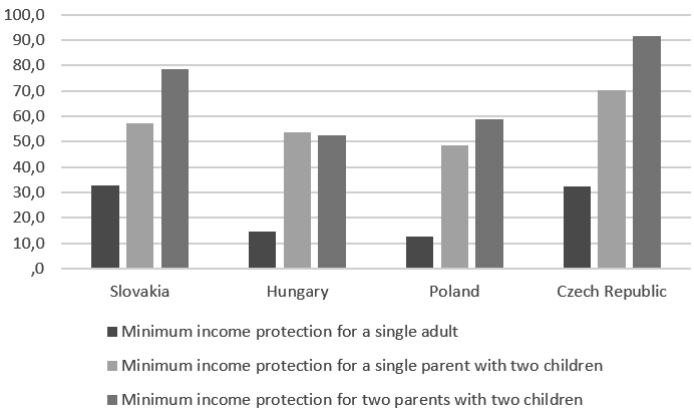
Finally, it is worthwhile comparing the amount of social benefits with the net average wages in the countries under analysis to reveal the relative value of transfers in the given economic environment. Since the net average wage is more or less similar in Poland, Slovakia, Hungary and the Czech Republic, this comparison does not significantly modify the differences that can be seen in the euro-based calculation provided above. Net average wages are lowest in Hungary (613 EUR), therefore the relative value of the aggregated Hungarian transfers is slightly closer to the other three countries. The diagram below shows that Poland and Hungary significantly lag behind the Czech Republic and Slovakia in terms of not only the absolute but also the relative value of minimum social transfers.

Figure 4 *Amount of all available social allowances in CEE countries (2016) (EUR)*



Source: SAMIP (2013) and MISSOC (2016) with the author's corrections

Figure 5 *Amount of all available social allowances in CEE countries compared to monthly net average wage (2016) (%)*



Source: SAMIP (2013) and MISSOC (2016) with the author's corrections

SUMMARY

The paper was written to introduce and compare the minimum social protection systems in Hungary, Poland, Slovakia and the Czech Republic. The study examined those non-contributory social, child welfare and housing allowances that are available even to the lowest strata of society based on their financial needs. Although the majority of these social allowances are already means-tested, the national governments occasionally define behavior-related conditions too, such as participation in public work programs and compulsory schooling of children.

The structure of minimum protection systems was analyzed among three allowance categories: (1) regular social allowances, (2) housing support, and (3) family allowances, in three household types: single-adult-, single-parent-, and two-parent households. The structure and emphases of minimum allowance schemes are quite different in the four CEE countries. Poland and Hungary put significant emphasis on targeted family- and child allowances, do not maintain a differentiated system of housing support, and provide only a moderate amount of money in the form of general social allowances. In contrast, Slovakia, and particularly the Czech Republic, maintain a generous housing allowance system, which is highly sensitive to the number of children and other family-related conditions, so these countries pay significantly less direct child allowance compared to Poland and Hungary.

Examination of the aggregated values of minimum protection transfers shows that Slovakia and the Czech Republic provide significantly higher value transfers to all household types than Hungary and Poland.

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CHALLENGES OF FAILED MARRIAGES AND THE IMPLICATIONS FOR DELINQUENCY

Habeeb Abdulrauf Salihu, Hossein Gholami[1]

ABSTRACT *The study investigates the challenges of failed marriages and their implications for delinquency. The design of the study was a survey; purposive and snowballing sampling techniques were used to select 130 respondents. Triangulation of in-depth interviews and questionnaires were used as a framework for collecting information. Findings showed that there is a relationship between partners' experiences in failed marriages and delinquent behavior such as truancy, bullying, and children being out of parental control. It was established that infidelity and avoiding responsibility are the major factors responsible for failed marriages. Based on the findings, the study reinforces the claim that communication is an important element of a successful marriage. A marriage that involves too much blame, conflict, and verbal attacks keeps children away from home. Couples who experience difficulties should seek the assistance of marriage experts who may help them to identify problems and suggest ways to solve these.*

KEYWORDS: *challenges of failed marriage; abusive household; delinquency; implications; Ilorin; Nigeria*

INTRODUCTION

Marriage has the potential to enrich spouses' lives and add to gratification of life. Nevertheless, marriages can also cause distress, put a strain on partners, and sometimes even cause harm (Hassouneh-Phillips 2001). However, it has become difficult in our present society for marriages with no solid foundation

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to survive the increasing explosion in immorality directly linked to the selfishness that has overwhelmed our society. Never before in human history has there existed an era so geared towards the idea of "me first" in marriage (Seltzer 2000). In fact, the notion that is common to young couples of today is that marriage is all about love, and love to them is all about individual satisfaction in terms of intimacy and material needs (personal fulfillment**)** (McCarthy – McCarthy 2005).

Changes in the worldwide social outlook have added to the downfall of marital relationships; waning religious institutions and values have also contributed to the demise of wedlock. This can be seen in the growing independence of genders (Booth et al. 1995; Tikumah 2009). With the advent of dual career families (a situation where both partners pursue an independent career or job), quarrels over the division of household tasks between partners have become a major cause of marital problems. This is because most couples nowadays agree about how these tasks and burdens should be shared, particularly childcare and household expenses, in contrast to the traditionally assumed responsibilities whereby wives take care of the household and children while husbands provide the income needed to support the family (Busari 2011; Bianchi – Milkie 2010). Consequently, the change in gender independence between men and women has resulted in a significant increase in the instability of marriage (McCarthy – McCarthy 2005).

Modernization, which has given rise to the development of urbanization, information technology, and modern society, has also belittled the concept of traditional marriage. It has rendered marriage immaterial, and made it no longer commensurate with today's expectations (Bumpass 1994). It has also allowed the forces operating outside the home to have a significant influence on the minds of family members who are now largely influenced by their work and relationships with colleagues and non-family friends through social media. As a result, the principal identities usually identifiable with the collective family no longer exist (Manning et al. 2007; Kaplan – Michael 2010). Today, attitudes permissive of fornication, adultery, rape and every form of promiscuity flood our societies through literature, movies and the arts (Buijzen – Patti 2003). Modern tales and legends disparage wedlock, and unfaithful celebrities routinely make the headlines instead of good examples of loyalty and fidelity (Ray – Kana 2010).

Consequently, marriage has become a "throw-away-commodity," even perceived by some as mere household garbage to be used and thrown out (Busari 2011). It seems that the customary vow "till death do us part" is no longer applicable, but lasts only as long as "my needs" are provided for, and the failure of a spouse to meet the needs (usually financial and sexual) of the other spouse creates a marital crisis. Typically, problems occur in the

home when stress and unresolved conflicts generate worry and hatred, which later becomes too severe to be handled. This often results in resentment, frustration, and hopelessness, which in turn have grave impacts on the well-being of children (Fincham – Steven 1999). The negative feelings between couples sometimes make them do despicable things such as exchanging harsh words and beating and physically abusing each other in the presence of children. Couples sometimes disengage completely from one another without any consideration for their children (Busari 2011). It is against this backdrop that this study examines the challenges faced by couples experiencing failed marriages and the implications for juvenile delinquency. The purpose of this study, therefore, is to examine the implications of failed marriages on delinquent behavior among children living in (such homes) Ilorin metropolis, Nigeria. Specifically, the study was designed to:

a. Describe the major factors that may be responsible for failed marriages,
b. Explore the pattern of children-parent relationships in failed marriages,
c. Investigate the relationship between failed marriages and delinquent behavior, and
d. Suggest adaptable steps for managing and coping with failed marriages and the affected children.

CONCEPTUALIZING SUCCESSFUL AND FAILED MARRIAGE

Just like individuals, all marriages are not alike. However, research in this area has found similarities among husbands and wives in healthy marriages. Wood et al. (2012) like Ooms (2007) and Burr (1976) asserted that couples in successful marriages are committed and giving people, and this generosity implies that they satisfy their spouse's emotional needs, do not keep scores, spend much time seeking advice and exchanging ideas, and express gratitude and admiration. In addition, commitment to marriage values, sharing common interests and working to achieve them, openness of opinions and feelings (communication), trust, role model virtues, and sexual desire and fulfillment against all odds are the basic features of a successful marriage (Wood et al. 2014).

However, Glenn and Michael (1984), Perry and Steven (1992) and Kozu (1999) observed that a failed marriage results from a gradual accumulation of aggravation, hurt, resentment, ego, and miscommunication in a relationship. Perry and Steven (1992) further stated that each time one or both spouses choose to ignore signs of discord and avoid communicating, what each of them is really feeling is that their relationship is coming closer to the end. Grych et al. (1992)

asserted that partners in a failed marriage experience feelings of insecurity and need (i.e. deprivation) when not around their partners as they tend to critically judge each other's differences when conflict arises such that they are unable to solve problems; they feel stifled if the other partner is not ready to hear them out or take their point of view into consideration, thereby resulting in withdrawal of intimacy, sex and love. Glaser (2002) also noted that, in an unhealthy marriage, partners do not communicate openly and honesty disappears. Lies and withholding important information from each other become the order of the day. Similarly, partners complain to third parties about their spouses instead of talking to them and settling problems, thereby diminishing the quality of the marital relationship.

Wood et al. (2012) noted that frequent disagreements, abusive behavior, and disrespect among couples are signs that all is not well in a marriage. Wood et al. further stated that some couples resort to constant name-calling or rude behavior and bringing up issues that purposely hurt the other person. Some partners not only curse each other but may even throw objects at each other. Gottman (1993) added that fighting and persistent physical abuse such as beating, biting, grabbing, punching, slapping, kicking or shoving, forced sex, and the use of weapons in extreme cases are common among partners experiencing failed marriage. In the same line, Fincham and Steven (1999) also observed that the act of approaching a conversation with quarrel, accusations, and deprecating comments are indications of a failed marriage.

Factors that may result in failed marriage

it is a common belief that stress and fighting over money constitute one of the major problems that couples face. In tough economic times, for instance, financial strain can actually cause misunderstanding and fights and more conflict over things unrelated to money, as well as money-related issues (Gottman 1993). Other factors may include:

Poor communication: Communication has been identified as one of the most fundamental elements of a healthy marriage. Communication allows partners to share and discuss their challenges and the problems they encounter within and outside the home, thus it makes partners feel loved. An absence of communication, on the other hand, complicates issues, undermines the foundation and purpose of marriage, makes partners lose interest in the union and can have severe consequences for the ability of the couples to sustain the union (Raush et al. 1974; Gottman 1993).

Sexual Fulfillment: Sexual dissatisfaction is a sensitive subject in most marriages which most partners find very difficult to discuss openly. In a situation where a partner summons the courage to raise the issue, expecting cooperation from the other in terms of solving the problem, it is often dismissed or minimized by the other partner and sometimes turns into fighting (Cleary – David 1983). As Tikumah (2009) has noted, complaints about sexual dissatisfaction in marriage are hard to express and unpleasant to receive. Tikumah further argued that sexual dissatisfaction among couples in most cases leads to emotional disengagement, which consequently leads to infidelity.

Economic and Educational Disparity: Beckham (1992) noted that women who have married down the socioeconomic ladder experience smaller gains from marriage in terms of the fulfillment of their material needs, and thus may over time feel deprived and enjoy the marriage less, potentially resulting in a failed marriage. In addition, a wide educational gap between spouses may be a major contributor to a failed marriage. As Omage (2013) argued, when there is a wide gap in spouses' levels of education, there is the likelihood of discrepancies in their attitudes and approaches to life and disagreement about how to handle issues. These differences may make it very difficult for partners to get along and maintain a peaceful and stable home.

Age: Age is an important factor that sometimes contributes to problems in marriage. Booth and John (1985) asserted that age is a significant factor that may result in marital instability. For instance, the husband-wife age gap is a factor that can cause a problem in the home if care is not taken. If the wife is older than the husband, the likelihood of instability is increased significantly, most especially in Africa where major importance is attached to age. Similarly, couples who are very young when married are believed to be at risk of experiencing unstable marriages because the necessary experience needed to establish a happy home is potentially yet to be gathered (Blood – Donal 1960).

Parental approval: Parental approval is another factor related to marriage success for two reasons: first, approving parents are more supportive (emotionally, morally and financially) and second, disapproving parents are not always supportive and usually shun couples when they face turbulence in their union (Ekiran 2003). This seems to be a common problem couples face, most especially among the Yoruba ethnic group in Nigeria. When in-laws give their approval to a marriage, they render the necessary assistance to the couple even if they both face other challenges in their union. Parents may be able to mediate and help solve problems. However, if a parent objects to a union, the probability of the couple maintaining a stable home life is zero (Burns 1984). A survey conducted by Richard and Amy (2001) in California, revealed that 87% of marriages not supported by either of the parents (in-laws) ended in battles and separation.

Issues regarding children: Issues regarding children have also been identified as another factor affecting marriages. Experts believe that crises erupt in marriages when there is less glue to hold the marriage together, one source of which is children (Waite – Lee 1991). In some marriages, children are the cause of conflict, but generally children are a stabilizing factor in marriages, and when children are absent, a marriage is likely to be rocked by minor storm (Hetherington et al. 1998). In most cases, peace and order usually reign in marriages prior to the arrival of the first child. There may be conflicts, but they are not usually frequent and are often easy to resolve (Waite – Lee 1991). After the first child arrives, couples are faced with conflicts they have never encountered before. Their lives begin to change as they assume new responsibilities. These changes require the couple to make new decisions, which may lead to conflicts of interest (Booth – John 1985).

Prior Marriage: Matthews et al. (1995) argued that an earlier marriage of a husband or wife may increase the likelihood of conflict and dissolution of a later marriage. A husband may have children from a previous wife and, as Robles et al. (2014) noted, the presence of such children may decrease the gains from the current marriage, thereby leading to crisis. In addition, for women prenuptial conception or a child carried into a new marriage is more likely to be associated with high risk of failed marriage. Similarly, the issue of the legitimacy of a child is a serious factor that can turn a happy home into a combat arena.

Reason for getting married: Partners marry for different reasons: some get married with so many expectations and aspirations. When such expectations go unfulfilled after some years of marriage, a sense of disappointment sets in, and they may begin to see nothing good in the marriage. Carrère et al. (2000) claimed that the reason couples get married is an important factor that can contribute immensely to the success (failure) of a marriage. Usually, marriages that began and build on genuine understanding and caring succeed better than those that start for the wrong reasons, such as a desire to escape home, to rebel, or to obtain social and financial status (Edin – Joanna 2005).

From the foregoing, it can be observed that there is no specific factor responsible for failed marriages. The source of problems may be a combination of the factors highlighted above, or something entirely different.

Challenges faced by couples in failed marriages

Couples in failed marriages do not seem to obtain the benefits that a marriage can offer. In fact, the stress may make them less healthy. Choi and Nadine

(2008), and Kiecolt-Glaser and Tamara (2001) have proved that when one or both partners become overwhelmed and flooded with anger and resentment, this results in psychological changes in the body such as an increased heart rate and abnormal blood pressure; these psychological responses negate the ability to effectively resolve the conflict.

Other challenges may include a lack of intimacy (affection and sexual relations) – affection and sexual relations are the glue which hold a marriage together. Sexual intimacy, for instance, is typically the one major form of contact which separates the relationship of a couple from one with ordinary friends or roommates. However, it is difficult for couples experiencing a failed marriage to engage in sexual intimacy. One partner may ignore the other sexually, while the denial of a partner's sexual intimacy needs may amount to emotional abuse, making the other feel unwanted, undesired, unworthy, and unattractive (Beckham 1992). In addition, taking a partner for granted, physical abuse, and the use of frequent threats (threats are often made in a situation of desperation, or when one partner senses that a situation is out of control) as well as silent treatment – a situation where a partner behaves in an unreceptive manner in response to a particular issue or shows their grievance by ignoring or not speaking to the other partner – are also notable reasons for marriage failure (Kozu 1999).

IMPLICATIONS FOR DELINQUENCY

O'Hagan (1993) and Davies et al. (2008) noted that when tension and conflict are the norms in any unhappy marriage, parent-child interactions and relationships usually show some sign of strain. Conflicts drain the necessary and valuable resources that hold the relationship together and make way for inconsistent and ineffective parenting. Marital conflicts have a devastating impact on children because they can trigger psychological and behavioral problems in children such as depression, anxiety, aggression, and withdrawal. Correspondingly, while attempting to obtain a clearer view of how children respond to parental conflicts, Davies and Cummings (1994) used Emotional Security Theory (EST) to explain that children's elevated response to parental conflicts develops from repeated exposure to such destructive behavior which increases the likelihood they will have psychological problems.

Furthermore, emotional deprivation or neglect is a form of abuse suffered by children living with parents who are experiencing a failed marriage. Emotional deprivation is an important and sensitive form of neglect that a child or an adult may encounter having been denied emotional attention by the people

who are supposed to provide it. Emotional loneliness in adult life may be a result of neglect and unsupportive relationships in childhood (Kirman 1973). Using Social Control and Attachment theory, Hoeve et al. (2012) stressed that emotional deficiencies in children often occur when there is lack of attachment (or poor attachment) to parents. Hoeve and colleagues further noted that the effects of this go far beyond physical abuse, which is usually expressed in beatings, bruises and broken bones. Accordingly, adolescents with poor attachment relationships have higher levels of delinquency. Glaser (2002) also observed that a child who suffers emotional deprivation may be just as damaged as if they were frequently beaten or subjected to other forms of physical abuse. Glaser further noted that emotional deprivation is more likely to occur among children who live in families where mothers themselves are in need of emotional support. These mothers might have been devastated by the conditions around them and thereby lost the caring ability normally associated with guardianship.

Kirman (1973) also observed that the early years of any child's life are crucial to their development. This is because during these early years children go through different phases of development, including interacting with the personalities of people around them. O'Flynn (1994) using Object Relations Theory observed that if necessary components such as love, caring, emotional support and a favorable environment are lacking, a child may be at a high risk of psychological disorder, antisocial attitudes, aggression, and challenges regarding managing anger as an adolescent. This suggests that the neglect and unsatisfactory relationships experienced during early childhood can have long-term effects on children.

Lerner and Domini (2013) established that partners not only fight (misunderstand, neglect, etc.) each other, but they in effect neglect and pass on wrong ideas to their children. Failed or unhealthy marriages deteriorate relationships between the child and at least one parent. It has also been observed that the children of failed marriages may acquire the same incapacity to work through conflict as their parents. Lerner and Domini have further stated that daughters from such families find it more difficult to value their femininity, and sons frequently demonstrate less confidence in their ability to associate with women, either romantically or at work.

METHODOLOGY AND SAMPLE

The research described herein used both a qualitative and quantitative descriptive approach to identifying and analyzing issues relating to the research objectives. A variety of sampling methods were employed, including purposive and snowballing

techniques. In-depth interviews and questionnaires were used as a framework for collecting information about the challenges faced by couples in failed marriages and the implications for delinquency. The researchers interviewed one married man and two married women of different age who were experiencing turbulence in their marriages and two children (aged 13 and 15) who were experiencing a failed marriage. In addition, questionnaires were administered to a total of 125 respondents (63 counselors, and 62 social workers). These experts were believed to have the background and adequate knowledge of people and families experiencing failed marriage. The information gathered was then analyzed using content analysis and Statistical Package for Social Scientists (SPSS) to generate simple percentage, frequency distribution, and chi-square statistics for some factor analyses of the responses relating to the research questions.

The demographic distribution of the respondents revealed that 57% of the respondents were male and 43% female. The majority of respondents (48.8%) were between the ages of 36-40 years old, 30.4% between 30-35 years old, and 20.8% above 41 years of age. In addition, 60% of the respondents were married; 4% single; 15.2% were divorced and 20.8% were widows/widowers. In terms of work experience, 27.2% of respondents had been in their profession for 1-10 years, 38.4% had 11-20 years' experience, and 34.4% had 21 years' work experience or more (Appendix).

RESULTS AND DISCUSSION OF FINDINGS

Regarding our first research question, Table (1) presents respondents' responses to a question about the factors responsible for failed marriages.

Table 1 *Major factors responsible for failed marriage*

Items	Counselors	Social workers	Frequency	Percentage %
Financial issues	9	10	19	15.2
Unfulfilled expectations	3	4	7	5.6
Division of domestic responsibilities	0	2	2	1.6
Problems regarding children	3	0	3	2.4
Infidelity	28	30	58	46.4
Parental approval prior to marriage	1	3	4	3.2
Avoiding responsibilities	19	13	32	25.6
Total	63	62	125	100

Source: Based on authors' survey (2016).

Table 1 shows that 46.4% of respondents (counselors n=28, and social workers n=30) believed that infidelity is the major factor behind failed marriages among couples, 25.6% claimed that avoiding responsibilities in the family is the cause, 15.2% were of the view that financial issues in the family were the major contributor to the incidence of failed marriages, 5.6% blamed unfulfilled expectations in the family, 3.2% specified parental approval prior to the marriage, 2.4% believed that the issue was related to problems with children, while 1.6% of respondents highlighted the division of domestic responsibilities. Thus the majority of respondents held that infidelity is the major factor in failed marriages among couples in the Ilorin metropolis.

Moreover, concerning the factors responsible for failed marriage, partners who were actually experiencing a failed marriage responded in the following manner: Female Respondent 1 observed that *"When the love partners share disappears, every other problem occurs. In most cases, financial difficulty causes a problem in the house. When the wife complains, it may result in verbal abuse and even beating. Avoiding responsibilities in the house as a husband or father is also one of the ways men use to get back at their wives when they have done something wrong. Most of them provide for their children needs, but the wife's needs such as intimacy and time are denied. Above all, infidelity is the major cause of marital discord. When your husband is having an affair and you cannot do anything about it, you will be afraid to talk about it because you never know what the response might be."*

Similarly, Female Respondent 2 stressed that "*Financial issues are a general problem in every marriage, I think. They become much more of a problem when the husband tries to boycott his responsibilities as husband and father with flimsy excuses, or an I-don't-care attitude in the name of 'I don't have money'. It pains when you realize your husband is refusing to provide for the family simply because he dislikes his wife. I think the major factor behind unhealthy marriages or homes in our society is infidelity. When a man starts having extramarital affairs, he will typically begin to avoid responsibilities, most especially when the wife complains about the affair."*

Furthermore, the Male Respondent noted that "*Adultery or unfaithfulness is what no man can accept. This poses a serious challenges to marriages. In my case, for instance, I am a state civil servant and everyone is aware of my poor salary. Despite this, I tried to provide for my family within my capability. It is however disheartening that the woman I struggle to provide for cheats on me. I decided not to send her away because of my children, but I think things will never be the same again between us....We did have arguments over money before the incidents. I think issues surrounding money are a general problem in every home. But the major cause of a failed marriage is infidelity."*

From the perceptions of the counselors and social workers and in the opinions of people actually experiencing failed marriage, it is highlighted that infidelity and avoiding responsibilities are the major factors responsible for failed marriages, although other factors such as financial issues are also in play.

Table 2 *Children-Parent relationships in failed marriages*

Items	Counselors	Social workers	Frequency	Percentage%
Cordial with both parents	0	0	0	0
Resentment towards one of the parents	21	25	46	36.8
Feeling unsafe in relation to both parents	23	15	38	30.4
Feeling reserved	19	22	41	32.8
Total	63	62	125	100

Source: Based on authors' survey (2016).

Table 2 presents respondents' responses to a question about patterns of children-parent relationships in failed marriages. The table shows that 36.8% of respondents were of the view that children in a failed marriage resent one of the parents, 32.8% believed that children living with parents experiencing failed marriage feel reserved and withdrawn, 30.4% perceived that children in failed marriages feel unsafe relating to both of the parents, but 0% (none of them) believed that children enjoyed a cordial relationship with both parents in a failed marriage.

Additionally, concerning the interviews that were conducted with the two children living in failed marriage, the children responded to the question about their relationship with their parents in the following manner; Child 1 noted that *"I saw my daddy and mummy shouting at each other. Sometimes mummy cries when daddy beats her. She left the house many times and came back after some days when grandma came around to talk to daddy. I and my sisters used to cry. We love to stay with mummy because we love her and don't want to see her cry again....we love daddy too but we are always afraid of him."*

Also, the second child (Children 2) said that *"I don't feel safe with my father because he makes my mother cry all the time. They often make a noise and fight in the house. My father often told me to warn my mother to stop challenging him....I talk to my mother when I have a problem or need something. She often told me to talk to my father about it, but I am not always happy staying with him because he yells."*

Furthermore, from the interview with the women experiencing a failed marriage, Female respondent 1 noted that "*My children seem to be more comfortable around me as the mother. They prefer to share their problems*

with me or ask for anything they need. They find it difficult (most especially my daughter) to face their father. I guess they are always afraid." Similarly, Female respondent 2 also noted that "*My son once told me that we should pack and leave the house because he hates his father. That shows how afraid he is. He sometimes discusses his problems with me after several appeals. Most of the time he prefers not to discuss them with anyone."*

From the above findings, it can be seen that children living with partners experiencing failed marriages do not have a cordial relationship with their parents. Some tend to associate themselves with one of the parents and resent the other one; some feel unsafe associating with both parents, and as result withdraw from home life. The findings are in agreement with those of Harold et al. (2004) about marital conflict and child emotional security, who found that marital conflict between couples significantly predicts internalizing and externalizing problems and psychological distress in children who often feel insecure relating to either of the parents. The result also agrees with the findings of another study by Omage (2013) about the issues involved in marriage failure, in which the author found that persistent marital discord between couples affects children's ability to relate to one of the parents (usually the father).

Table 3 *Respondents' perception of delinquent behaviors common among children living with spouses experiencing failed marriage*

Items	*Groups	Strongly Agree	Agree	Strongly Disagree	Disagree	Frequency	Total
Aggression and bullying	A	18 (28.6%)	38 (60.3%)	0 (0%)	7 (11.1%)	63	125
	B	21 (33.9%)	30 (48.4%)	0 (0%)	11 (17.7%)	62	
Out of parental control	A	14 (22.2%)	32 (50.8%)	11 (17.5%)	6 (9.5%)	63	125
	B	16 (25.8%)	24 (38.8%)	3 (4.8%)	19 (30.6%)	62	
Truancy and peer influence	A	21 (33.3%)	38 (60.3%)	0 (%)	4 (6.4%)	63	125
	B	16 (25.8%)	42 (67.7%)	0 (0%)	4 (6.5%)	62	

Source: Based on authors' survey (2016). ****A-** Counselors, **B-** Social workers*

Respondents' perceptions of common delinquent behaviors among children living with spouses experiencing failed marriage are presented in Table 3. The results show that 28.6% and 60.3% of respondents (counselors) strongly agree (agree, respectively) that aggression and bullying are common behaviors among children living with partners experiencing failed marriage, while 11.1% disagree. In addition, 22.2% and 50.8% of the respondents strongly agree (agree) that being out of parental control is common among children living with partners experiencing failed marriage, while 17.5% and 9.5% of respondents strongly disagree (disagree), respectively. Also, 33.3%/60.3% of respondents strongly agree (agree) that truancy and peer influence are common delinquent behaviors among children living with partners experiencing failed marriage, while 6.4% of respondents disagree.

Furthermore, 33.9% and 48.4% of respondents (social workers) strongly agree (agree) that aggression and bullying are common behaviors among children living with partners experiencing failed marriage, while 17.7% of respondents disagree. In addition, 25.8% (38.8%) of respondents strongly agree (agree) that being out of parental control is common among children living with partners experiencing failed marriage, while 30.6% of respondents disagree. Also, 25.8% (67.7%) of respondents strongly agree (agree) that truancy and peer influence are common delinquent behaviors among children living with partners experiencing failed marriage, while 6.5% of respondents disagree.

The perception of the experts, as analyzed above, is related to the views of partners who are experiencing failed marriage. Female respondent 1 stressed that "*My children have seen us scream at each other and fight several times. The situation really affected my daughter (10 years old). She is moody most of the time, truly it has affected her performance at school. I haven't noticed any sign of delinquency in her. However, my two boys (12 and 7 years old) have started behaving strangely, such as being aggressive and fighting. Their class teachers (most especially of the 12-year-old boy) have called to report on them several times. He (the 12-year-old boy) sometimes refuses to answer me when I call on him to do something, and he beats his siblings mercilessly sometimes, although his younger brother (7-year-old boy) always wrestles with him. The only thing they fear is when you threaten to report them to their father. Then they stop and beg me not to. Perhaps because they have seen his handiwork on me....although children generally (most especially, boys) are often stubborn at a certain age. In terms of my boys, I think they are more aggressive towards each other and other children. I guess my marriage is tearing them apart. We caused it."*

Also, Female respondent 2 noted that "*I think our fights and disagreement are having a serious influence our children's behavior, most especially our son (11 years old). My son has run away from home three times. The first time he*

ran away I was not around then. I had a serious fight with my husband and was forced out to live with a friend for some days. He was found after three days on the street with other street children. Afterwards, he ran away anytime he saw us fight or when I cry....when I asked him why he ran away from home, he burst into tears and said to me 'please stop fighting with daddy.' I think he couldn't bear the situation anymore. He feels much more comfortable away from home the way I see it."

Table 4 *Respondents' perception of the experiences of couples in failed marriage*

Items	*Groups	Strongly Agree	Agree	Strongly Disagree	Disagree	Frequency	Total
Lack of intimacy (affection, sexual and emotional deprivation)	A	35 (55.6%)	28 (44.4%)	0 (0%)	0 (0%)	63	125
	B	42 (67.7%)	20 (32.3%)	0 (0%)	0 (0%)	62	
Absence of communication	A	23 (36.5%)	37 (58.7%)	0 (0%)	3 (4.8%)	63	125
	B	28 (45.2%)	34 (54.8%)	0 (0%)	0 (%)	62	
Frequent disagreement, nagging, fights and physical abuse	A	41 (65%)	22 (35%)	0 (%)	0 (0%)	63	125
	B	53 (85.5%)	9 (14.5%)	0 (0%)	0 (0%)	62	

Source: Based on authors' survey (2016). ****A****-Counselors,* ***B****-Social Workers*

Table 4 presents respondents' responses to a question about the experiences of couples in failed marriage. The table shows that 55.6% (44.4%) of counselors strongly agree (agree) that a lack of intimacy (such as affection, emotional and sexual deprivation) is a common experience among partners in failed marriage. However, 36.5% (58.7%) also strongly agree (agree) that an absence of communication is common among partners experiencing failed marriage, while 4.3% of the respondents disagree. In addition, 65% (35%) of respondents strongly agree (agree) respectively that frequent disagreement, nagging, fights and physical abuse is common among partners experiencing failed marriage.

In addition, 67.7% (32.3%) of social workers strongly agree (agree) that a lack of intimacy (such as affection, emotional and sexual deprivation) is a common experience among partners in failed marriage. 45.2% (54.8%) also strongly

agree (agree) that an absence of communication is common among partners experiencing failed marriage, and 85.5% (14.5%) strongly agree (agree) that frequent disagreement, nagging, fights and physical abuse are common among partners experiencing failed marriage.

From the interviews, Female respondent 1 noted that "*Every marriage is faced with one challenge or another. The stress and challenges are double for partners that are not getting along. There is always emotional and psychological distress. Continuous disagreements and fighting over issues, beating and physical abuse and sexual deprivation are part of the common challenges and experiences faced by women in failed or unhealthy marriage. You sometimes feel like not going home, but for the sake of the children, you have to."* Also, Female respondent 2 stressed that "*The list of the experiences women encounter in such marriage is endless. Emotional torture, shouting, beating, and all forms of physical abuse and sometimes rape when you are trying to deny them sex just to protest the way you are being treated. It is an unpleasant experience."* In addition, the Male respondent pointed out that "*We experience frequent disagreements which often leads to nagging and sometimes fighting. There is a complete absence of communication and misunderstanding. I think they (women) feel the effects much more than us (men)."*

From the above findings, it can be observed that partners experiencing failed marriage undergo specific challenges or difficulties, although there may be variation in the impacts.

Table 5 *Mean and Chi-square analysis of the experiences of spouses in failed marriage and delinquent behaviors*

Items	Mean	DF	X2	X-Value
Experiences of spouses in failed marriage				
Lack of intimacy, absence of communication, Frequent disagreement, fights, and nagging	7.24	4	67.300	9.488
Delinquent behaviors				
Aggression, out of parental control, truancy, bullying, and peer influence				

Source: Based on authors' survey (2016)

Table 5 shows the cross-tabulation of the mean and calculated chi-square of respondents' perception of the experiences of partners in failed marriage and the implications for delinquent behaviors. The figures indicate that the calculated chi-square $X^2 = 67.300$ is greater than the critical value 9.488 at the 4 degree of freedom and 0.05 level of significance. Since the chi-square observed value

is greater than the critical value, one can assume that there is a relationship between partners' experiences in failed marriage and delinquency in children living in homes with such situations.

From the above-described findings it can be deduced that there is a relationship between partners' experiences and the challenges of failed marriage and juvenile delinquent behaviors such as aggression, being out of parental control, truancy, bullying and peer association. This finding corroborates the work of O'Flynn (1994) who found that children living in an unfavorable environment such as an unhealthy home where necessary components such as love, caring, and emotional support are lacking, and where there are frequent fights and physical abuse between partners, may be at high risk of psychological disorder, antisocial attitudes, aggression, and challenges managing anger as adolescents, and be highly influenced by their peers. Furthermore, the results are also in line with the findings of Cummings and Davies (1994) who reported that continuous fighting or conflict amongst parents increases children's exposure to different behavioral, emotional and social problems such as aggression, truancy, and other delinquent acts.

SCOPE AND LIMITATIONS

The study is not without its limitations. It was conducted only in the Ilorin Metropolis of Kwara State, Nigeria. Obtaining access to information about failed marriage and those experiencing it in Ilorin is difficult because of the religious and cultural values that make marriage a sensitive and private matter, and the stigma partners may face when information about their marriage enters the public domain. The present study investigated the perception of experts and interviewed only a few individuals experiencing failed marriage. Measures were self-reported. For this reason, there is bound to be bias in the responses. Nonetheless, the study was able to grasp the challenges of failed marriages and its effect on children. In this regard, it is expected to stimulate further research of this nature.

CONCLUSION AND RECOMMENDATIONS

Disagreements in a marriage are inevitable because they are part of every social interaction. How partners manage or control them determines how they

get along. However, the best environment in which to learn how to handle disagreements is within the family or with loved ones. When children watch their parents continually fight, they are liable to develop the same habits and believe this is the best way to handle things. Poor conflict management in marriage permanently weakens the parent-child relationship and results in destructive ways of handling conflict and the poor self-image of children later in life. Based on the findings and literature that was reviewed, the following strategies are recommended to help create a happy family and a conducive environment for children:

Marriage needs acceptance, admiration, appreciation, and emotional safety. Spouses should try to work things out as much as possible by appreciating, accepting and admiring each other and remember what they saw in each other before marriage. In addition, it is always very difficult and sometimes disrespectful to try to change a spouses' thinking or ideology through threats, mockery, or nagging. These types of approaches attack one's personality, character, and intelligence, and even undermine the mutual respect that forms the basis of love. Couples should try their best to devise a better way of understanding each other's differences instead of nagging, criticizing and attacking each other. Moreover, communication is an important element of a successful marriage and is a process that requires patience. Couples should find all possible means to communicate because it is this factor that holds a marriage together.

Moreover, many marital problems are caused by numerous factors couples may find difficult to identify, discuss and fix. Partners who are experiencing difficulties in their marriage and who are willing to resolve conflicts and live peacefully need to seek out experts who can mediate, such as counselors, social workers, and psychotherapists who can help them to understand the source of the conflict and suggest how to work through the process of resolving their grievances. Marriage experts are often in the best position to analyze the likely challenges partners are experiencing. Marriage experts now practice in collaboration with legal experts, mental health professionals and other specialists to offer various options to partners who experience difficulties in their marriage in terms of learning coping strategies and conflict resolution skills.

Furthermore, one of the most important services that many people ignore in Ilorin metropolis is premarital counselling. People believe marriage is a private issue that does not need the intervention of third parties or strangers. However, pre-marital counselling is one of the best marriage-related tools for helping partners to understand themselves, the tasks that lie ahead, and the potential challenges of marriage. Young people should be sensitized by the various religious and social organizations about the importance of pre-marital counselling.

Finally, children who have experienced and been affected by the situation of failed marriages should be encouraged to visit experts for the possible rehabilitation and realignment of their feelings and thoughts about the way their parents handle situations at home. They need love and affection from both parents, even if they do not get along.

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APPENDIX

Demographic information of participants (n = 125)

Gender	**Frequency**	**Percentage (%)**
Male	71	57
Female	54	43
Total	125	100
Age	**Frequency**	**Percentage (%)**
30-35	38	30.4
36-40	61	48.8
41-above	26	20.8
Total	125	100.0
Marital status	**Frequency**	**Percentage (%)**
Single	05	4
Married	75	60
Divorced	19	15.2
Widow/widower	26	20.8
Total	125	100
Profession	**Frequency**	**Percentage (%)**
Counsellor	63	40.4
Social worker	62	49.6
Total	125	100.0
Years of experience	**Frequency**	**Percentage (%)**
1-10 years	34	27.2
11-20 years	48	38.4
21- above	43	34.4
Total	125	100

Source: Based on authors' survey (2016).

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CHANGES IN SUBJECTIVE QUALITY OF LIFE AFTER THE ECONOMIC CRISIS IN HUNGARY

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ABSTRACT *This paper is written to describe the changes in the subjective quality of life of the Hungarian population and its different social-demographic groups after the economic and financial crisis of 2008. These changes are analyzed in this study based on pooled cross-sectional data from the European Social Surveys by using a multidimensional quality of life index. Applying the difference-in-differences method, the study compares two periods: before and after the crisis. The theoretical frame of this research is given by the early welfare theory of Eric Allardt (1973), and its revised version from 1993. Results show that the average subjective quality of life of Hungarians had not changed significantly by 2012. However, the quality-of-life differences of groups specified by marital status and labor market presence increased after the crisis, but that of other dichotomous groups determined on the bases of subjective health, safety and income adequacy did not. In addition, the benefits of an optimistic subjective perception of quality of life also increased by 2012. These findings are valid despite the fact that the year 2012 can be viewed as the culminated effect of the recovery period, according to several macroeconomic, inequality and subjective indicators. Overall, the study is novel in three ways: first, it examines not simply the effect of the economic crisis of 2008 on subjective quality of life, but also its effect on the difference between social groups; second, the research employs a new multidimensional index for evaluating subjective quality of life; and third, it provides new evidence to support set-point theory.*

KEYWORDS: *crisis, having-loving-being, subjective quality of life*

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INTRODUCTION

The 2008 financial and economic crisis was a shock for European societies. Its adverse effects were manifested primarily in weaker economic performance and higher unemployment rates, mainly among young people, and in growing social polarization, especially in transition countries. In parallel with this, the deterioration in living conditions has created more stress, uncertainty and frustration in the everyday lives of European citizens, first and foremost for vulnerable social groups (European Commission, 2014). Everyone has been able to perceive the negative effects of the crisis on their own quality of life, including Hungarians. Starting from the "crisis year" (2009), changes in the main macroeconomic, social- and income inequality indexes were unfavorable until 2012, but improvements occurred from 2013 onwards (Szivós-Tóth, 2013, 2015, Medgyesi-Nagy, 2014; Gábos et al., 2016; Medgyesi, 2016). Concerning subjective indicators, while both life satisfaction and personal happiness declined during the crisis – with a short interruption and a period of increase in 2010 –, after the years of recovery a return to pre-crisis levels had not happened by 2012 (Ivony, 2017). The research, this paper is based on, as part of a larger overall research study, was designed to investigate the effects of the economic crisis of 2008 on the subjective quality of life of Hungarians. We looked for an answer to the following research question: did the subjective quality of life of the population in Hungary (as measured using a multidimensional indicator) decline, on average, during the years of the recession compared to the years before the crisis? Regarding the fact that the crisis affected different social groups in different ways, we also investigated if there were any changes in the differences in the quality of life of individuals belonging to different social categories. Although the overall research effort was aimed at analyzing the effects of the crisis as a negative external event, the scope of the present study is limited and does not touch upon changes in the multidimensional indicators that measure subjective quality of life after 2013. Individual well-being is a multidimensional concept and researching this social phenomenon requires an interdisciplinary approach. We also note that, despite the fact that some psychological literature is cited in relation to affective indicators, the present paper does not not aim to analyze psychological well-being (Ryff, 1989; Ryff-Keyes, 1995), nor the state of mind of the Hungarian population (Kopp, 2008). Furthermore, consideration of the multidimensional measuring instruments which were developed based on the World Health Organization's statistical classification of mental and behavioral disorders are also omitted from this study (Harrison et al., 2016 based on Huppert-So, 2013). After the introduction, a brief overview of preliminary research is presented, followed by a description of data and methods. Then, empirical results are discussed. Finally, a short summary and suggestions for further research are provided to conclude the paper.

THEORETICAL FRAME AND PRELIMINARY RESEARCH

The theoretical frame of this research is based on the early welfare theory of Eric Allardt (1973, 1976). Accordingly, welfare is essentially defined as the satisfaction of materialistic-, social- and personal growth needs, originally based on Maslow's theory of basic needs, known as the "Having-Loving-Being" model. Later on, the former author defined a simplified concept (Allardt, 1993), in which subjective quality of life is conveyed by indicators of satisfaction about objectively measurable quantitative factors of the main dimensions of welfare. Welfare and well-being are two different concepts, and are appropriately distinguished in the literature. Accordingly, welfare depends on economic development, income conditions, educational level and, of course, on other needs, goods, and public services (Stewart, 1996). Furthermore, the quality of societies is also determined by improvements in quality of life and individual well-being, measured by individual perceptions of life circumstances (Diener et al., 1999; Spéder, 2000; Utasi, 2002); additionally, "quality of life contains more global evaluations of life position and perspectives, and well-being contains more domain-specific perspectives" (Sirgy et al., 2006:401). For our research we constructed a multidimensional subjective quality of life index which consisted of the subjective indicators of the "Having-Loving-Being" dimensions, as well as the long- and short-term emotional indicators sporadically found in the earlier Allardt model. The multidimensional indicator was developed with respect for the traditions of Allardt's sociology, and maintains the most important dimensions of welfare (having-loving-being), but also splits the scattered emotional element "feelings of well-being" (Allardt, 1973:8) into two dimensions that represent the emotional side of subjective well-being (Diener, 1984). Diener's theory was used to confirm this new conception; accordingly, we consider that affective subjective well-being consists of the following elements: global happiness as a long-term affect, short-term positive affects, and a lack of negative temporary emotions.

Set-point theory is often used in research into subjective well-being. It originates from the dynamic equilibrium model, and was developed based on the findings of household panel data analysis for developed countries, but has declined in importance over the past 30 years due to a lack of empirical and theoretical support (Headey-Wearing, 1989, 1991; Headey, 2008, 2010; Headey et al., 2014). In the wake of the economic crisis, this theory once again became the center of research efforts due to the contradictory findings of newer empirical studies (Gylfason et al., 2010; Gudmundsdottir, 2013; Cummins et al., 2014). We will return to this theory again in the summary of our results. According to the definition of the concept, individuals can be characterized by their average evaluation of subjective well-being during their lifetime that is determined by their social, material and cultural background. This average individual value is influenced by external positive or negative events that may happen as the consequence of macro processes (e.g., becoming unemployed), and individual life events (e.g., marriage,

childbirth, divorce, widowhood). As a result of these events, average well-being may deviate in some directions and extent, but over time returns to within the typical "set-point range" of the individual because of adaptation.

When analyzing the impact of the crisis on well-being, many studies have used this theory as a basis for interpretation, as Cummins and co-authors did (2014). According to their research results, the effects of the recession did not manifest in any significant deviation among the Australian population in terms of life satisfaction measured on a 10-point scale (using an analysis of 10 years of household panel data from HILDA surveys, starting from 2001). Differences in level of well-being moved only within the set-point range of the population thanks to their resilience. This approach incorporated external and internal resources such as income, family and friendships, and optimistic attitude, along with other factors such as the increased problem-solving ability of individuals, recovery from hardship, and their adaptation to adverse changes. This outcome may have happened not only because of personal resilience, but also due to market-supporting forms of crisis management, as seen in the cases of non-transitional European countries (Bjørnskov et al., 2014). After analyzing data from the Fraser Institute and the EuroBarometer surveys, Bjørnskov and co-authors explained the differences among countries by referring to the institutional approach to crisis management. While the well-being loss in times of crisis was more effectively minimized and the decline was smaller overall when government policies aimed at strengthening the economy were characterized by liberal or market-supporting decisions, centralized measures were, in contrast, followed by a greater decrease in the population's well-being after a recovery period in Eastern-European countries such as Hungary. As others (Greve, 2012; Helliwell et al., 2014) have also stated, among European countries – based on data from ESS surveys between 2002 and 2010 – there was a decline in well-being during the years of the crisis. However, a composite indicator of average life satisfaction and happiness showed a greater decrease in transition countries where the change in social trust played a determinant role and GDP per capita a lesser one in shaping well-being. The opposite is true of non-transitional countries with a lower degree of dissatisfaction. Based on ESS data (2002-2014), classification of the pooled sample into groups according to the main elements of socioeconomic-status (income, education and occupation) did not reveal any significant associations with life satisfaction for one, two, or three years after the crisis in most categories. There were two exceptions: individuals with the highest educational level, and one occupational subgroup (lower-grade service class), both with negative effects. However, unemployment status in each set indicated a continuously strong, significantly negative association with well-being in all three years (Clench-Aas & Holte, 2017).

Although the above-described preliminary research work, embedded in different theoretical conceptions about well-being during the recession, was rich in explanatory variables, well-being in most cases was measured using only a single-item indicator,

and was additionally tested on subgroups along with the main structural factors. Notwithstanding the utility of this approach, a single-item indicator is less reliable than a multidimensional one for measuring well-being (Diener & Biswas-Diener, 2000; Lim, 2008). Therefore, the question remains what results a multi-dimensional-indicator-based analysis applied to cross-sectional data in the case of Hungary would deliver, especially if data grouping were analyzed not only according to socioeconomic indicators but also using subjective indicators. Furthermore, most panel or cross-sectional research studies have used multivariate or multivariable analysis to examine the main or long-lasting effects on well-being. In contrast, based on pooled cross-sectional data we compared the post-crisis period to the pre-crisis one using the standard difference-in-differences (DID) method, which has rarely been employed in the literature.

CHANGES IN SUBJECTIVE QUALITY OF LIFE IN HUNGARY – HYPOTHESES

The adverse effects of the crisis in Hungary could be seen up to 2012, and are evident in macroeconomic statistics[2] and the quantitative and qualitative findings about subjective well-being (European Commission, 2014; Ivony, 2017). We predict a decline in subjective quality of life in Hungary during the period of recovery which can be explained by four main mechanisms: (I) a period effect, which affected everybody negatively. This theory will be verified or falsified through testing hypothesis number one (H.1); (II) Second, crisis periods are usually followed by a weakening of social integration which may lead to an increase in differences in the subjective quality of life of different social groups. To examine this explanatory mechanism, family status and presence on the labor market were chosen as the main indicators of social integration. This theory was tested through sub-hypotheses H.2/a-b; (III) Third, vulnerable social groups were harder hit by the crisis than others (classified by income adequacy, subjective health, and safety), showing the growing polarization of these sectors, as tested through sub-hypotheses H.3/a-c and described in the sub-paragraphs below; (IV) Fourth, we also tested the effect of the crisis on personal traits in relation to subjective quality of life based on empirical research findings about optimism (Wrosch-Scheier, 2003, Cummins-Wooden, 2014; Cummins et al., 2014). This theory is tested through hypothesis number four (H.4). (V) Moreover, we suppose that the spread of anomie accelerated, and that feelings of alienation also increased among Hungarian citizens during the recovery period. We hypothesize that this growing anomie and alienation played an important role in determining subjective quality of life. The expected negative association between these factors is tested through hypothesis five (H.5). The latter two assumptions are not considered explanatory

2 Source: www.ksh.hu; Szivós-Tóth, 2013.

mechanisms but we suppose they played important roles in shaping the subjective quality of life of Hungarians in the examined period.

Finally, it is plausible that the anticipated subjective quality of life decline by 2012 was due to changes in the proportions of social categories caused by macro processes compared to 2006. For example, the unemployment rate had increased by 2012. The effect of crisis-related unemployment on reducing well-being has already been proven in the literature many times, including in the case of Hungary (Helliwell et al., 2014; Bjornskov, 2014; Siposne, 2016; Clench-Aas & Holte, 2017). For this reason we do not examine the unemployed as a separate group here. Obviously, there are other potential explanations as well, such as the increasing uncertainty of the population, a factor which deserves further investigation beyond the scope of this paper.

Our hypotheses about the general subjective quality of life of the population based on the above-presented literature are thus as follows: *after the economic crisis, the average subjective quality of life of the Hungarian population decreased (H.1).* According to the literature, married people are in better physical shape compared to singles, and their life expectancy is longer. Additionally, marriage creates many advantages for both parties: married people always report higher subjective well-being compared to those who have never been married. The reason for this is that marriage not only provides a more reliable income and conditions of existence, but it also yields psychological benefits (Frey-Stutzer, 2003; Lucas et al., 2003; Graham et al., 2010; Hank-Wagner, 2013). The crisis brought more stress and frustration into peoples' daily lives (European Commission, 2014); consequently, *we also assume that the differences in the quality of life between married and unmarried groups increased (H.2/a).* Earlier analyses proved that being unemployed one or more times, for shorter or longer periods, independently of these parameters, has a negative effect on happiness (Oswald, 2003; Lucas et al., 2004; Headey et al., 2014). As we have already mentioned, the negative association of unemployment with subjective well-being has been described in the literature with regard to the economic crisis of 2008, also in the case of Hungary (Greve, 2012; Bjørnskow, 2014; Clench-Aas & Holte, 2017). In our research we also investigate the changes in the average quality-of-life differences of workers between the pre- and post-crisis periods compared to non-workers. We assume divergence and distancing between working and non-working groups according our hypothesis, as follows: *post-crisis differences in the quality of life of those who worked during this period and those who did not work increased (H.2/b).*

Many empirical research studies have stated that those who feel safe in their neighborhood and those who evaluate their general health as better are not only happier, but are more satisfied with their lives and also with their quality of life (Spéder-Kapitány, 2002; Lengyel-Janky, 2003; Graham et al., 2010). Regarding the subjective evaluation of income, this became one of the most important components of well-being among all those listed in terms of determining life circumstances after the crisis (Siposné, 2016).

Getting by with present income was also used as one of the major output indicators in explaining well-being (Hank-Wagner, 2013). Additionally, according to the Easterlin paradox, improvements in income situation do not result in an equivalent rise in satisfaction (Easterlin, 1974, 2001; Lengyel-Janky, 2003; Lelkes, 2003; Keller, 2008). This is the reason why we used income adequacy instead of solely income for creating dichotomous groups. Additionally, during the recession the polarization of society and material deprivation increased in Hungary (Szivós-Tóth, 2013; Gábos et al., 2016). We assume, based on the aforementioned literature, that the well-being of vulnerable social groups declined, and that of dichotomous groups further diverged. *We predict that the difference in subjective quality of life increased between those who were getting by on their present income and those who were not (H.3/a), as did the difference between those who subjectively felt themselves to be in good health, and those who did not (H.3/b), and also between those who felt safe and those who did not (H.3/c).*

According to the literature, individual behaviors are primarily characterized by personal traits as regards subjective quality of life; this correlation is determined (among many other factors) by a person's ability to reevaluate goals and also to be optimistic. Those who have an optimistic attitude compared to pessimists are more active, initiate more, and are better able to let go of unattainable goals and set new ones. This explains why optimists were less frustrated, achieved a better quality of life, and reported higher individual levels of well-being (Wrosch-Scheier, 2003; Graham et al., 2010; Cummins-Wooden, 2014; Cummins et al., 2014). These facts, together with other empirical findings (European Commission, 2014), suggest an increase in pessimistic attitudes among the population during this period; consequently, *we hypothesize that the differences in subjective quality of life between pessimists and optimists grew (H.4).* Crisis periods are usually followed by a weakening of moral values and norms and an increase in individual anomie and alienation (Andorka, 1996; Andorka-Spéder, 1996; Spéder et al., 1998; Elekes-Paksi, 2000; Hegedűs, 2000). However, in the case of individual anomie and alienation we did not create a dichotomous variable but rather measured the attitude using a summative scale (described in the data and method section) following the earlier work of Andorka (1996) about anomie and alienation. Based on the cited empirical research studies, we predict that the spread of anomie accelerated and that feelings of alienation increased in the population. Consequently, *we expected to find a strong negative association between subjective quality of life and anomie and alienation (H.5).*

DATA AND METHODS

The cross-sectional data used in the study come from the European Social Survey (ESS). For our empirical analysis we used data from the rotation modules about "Personal

and social well-being" from the third and sixth waves. Data collection was conducted by the Hungarian Gallup Institute between November 21, 2006 and January 28, 2007 (N=1518), and by the Social Research Institute (TARKI) between November 11, 2012 and February 17, 2013 (N=2014). The hypotheses of the research were tested by using the standard method of difference-in-differences on pooled cross-sectional data (Buckley-Shang, 2003; National Bureau of Economic Research, 2007). The data were weighted according to the ESS documentation guidelines. Analysis with multivariate data was undertaken using the ordinary-least-squares method. In the case of the dichotomous explanatory variables, this helps express deviation, which is the difference between the differences estimated before the crisis (2006=0) compared to the difference estimated after the crisis (2012=1). The following regression equation was used for subjective quality of life:

$$\hat{Y}= ß0+ß1*Year + ß2*X1+ ß3*(Year*X1) + e;$$

*where ß1= effects of the year 2012 ("after"); ß2=quality of life of married people compared to unmarried people ("treated group"), ß3= effect of years of crisis on married people's quality of life ("after" * "treated group").*

The difference-in-differences estimation is the interaction member's unstandardized beta value (B_3) expressed as follows: B3= (ȳmarried2012- ȳmarried2006) – (ȳunmarried2012- ȳunmarried2006). Based on the literature cited above, in this equation the Y is the output variable and its $\hat{Y}$ value is estimated with the explanatory variables in this model. On the right "ß0" is the constant in the regression equation (i.e., the mean value of the dependent variable when the explanatory variable equals 0); "Year" is the time of data collection; "ß1" is the effect of the year (the general effect of the recovery period); "X1" is the estimate of the individual parameter of the explanatory variable; "ß2" is the effect of the explanatory variable; "Year*X1" is the interaction product; "ß3" is the effect of the crisis years on the explanatory variables (in this study the unstandardized beta values are taken into account: B_3), and "e" is the residuum. The empirical findings should be treated with caution because of the effects of unmeasurable factors, and especially the impact of the year 2010. We emphasize that the present study was not designed to analyze the direction of causation between variables. Thus, the chosen statistical methods shed light only on correlations, as well as the direction, strength and significance of the co-occurrences of variables.

The composite subjective quality of life indicator as the outcome variable was operationalized through the following questions: (1) "All things considered, how satisfied are you with your life as a whole nowadays?" as a proxy variable of the "having" dimension; (2) "There are people in my life who really care about me." (2006); "To what extent do you receive help and support from people you are close to when you need it?" (2012). The two questions are different in form but measure the feeling of being supported, as the indicator of the "loving" dimension. (3) "I generally feel that what I do in my life is valuable and

worthwhile," as the indicator of the "being" dimension; (4) "Taking all things together, how happy would you say you are?" (5) The questions from the balance scale, which measures emotional balance based on short-term positive and negative feelings, were as follows: "How much of the time during the past week have you enjoyed life? … have you felt depressed? … have you felt calm and peaceful? … have you felt anxious?" Question numbers (1) and (4) were answered on an 11-item scale, where 0 meant "not at all happy/satisfied" and 10 meant "very happy/satisfied." In the case of (2)/2006, and (3) a five-point Likert scale was used, ranging from "Agree strongly" to "Disagree strongly." For question (2)/2012 a seven-value scale was used, ranging from "Not at all" to "Fully agree," recoded into a five-point scale. For registering short-term affects, four-point scales were used which ranged from "None or almost none of the time" to "All or almost all of the time."

The explanatory dichotomous variables were operationalized by the following variables: marital status ("married – unmarried"): family status [(1) Legally married/live in a legally registered civil union; (0) separated, divorced/civil union dissolved, widowed/civil partner died, none of these)], and "working – not working" for presence on labor market: "Which of these descriptions applies to what you have been doing for the last seven days?" [(1) in paid work; (0) in education, unemployed (was actively looking/did not seek job), permanently sick or disabled, retired, homemaker, other activity]. Health, safety, and income adequacy were specified with the following variables: "How is your health in general?" [(1) very good, good, fair; (0) bad, very bad], "How safe do you – or would you – feel walking alone in this area after dark?" [(1) very safe, safe; (0) unsafe, very unsafe], "Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?" [(1) Living comfortably on present income, coping; (0) finding it difficult, very difficult]. Personal traits were also measured on a five-point scale with agreement with the statement "I am always optimistic about my future." The scale measuring combined individual anomie and alienation consisted of the following four indexes (as a summative scale, with higher scores meaning greater alienation): "Most days I feel a sense of accomplishment from what I do." (inverse: lack of meaning), "To what extent do you feel that people in your local area help one another?" (inverse: isolation), "In my daily life I get very little chance to show how capable I am." (uselessness), "How much of the time during the past week have you felt lonely?" (loneliness). Responses were recorded in the cases of questions 1-3 on five-point scales and in the last case using a four-point Likert scale, as described above. The explanatory variables describing the statistics can be found in the annexes (Tables 1 and 2). Socio-demographic variables (sex, age, type of settlement, level of education, and net monthly household income per person) were used as control variables (see also annexes). Concerning the income control variables in the 2006 sample (N=1518), 189 people refused to answer the question about income, and in 75 cases the answer was "I don't know" (a total of 265). In 2012 (N=2014), the former category consisted of 483 and the latter 109 (a total of 592); these cases were excluded from the multivariate analysis.

RESULTS: DESCRIPTIVE FINDINGS

Examination of the descriptive statistics in the case of the five major variables of subjective quality of life led to the following conclusions: by 2012, people in paid work were usually satisfied, happy and self-fulfilled, felt supported, and had a positive emotional balance. In the case of married people (living in partnership), we found the same results with one exception: significance disappeared in the case of life satisfaction. Regarding income adequacy after the crisis, those who get by with their present income were typically happy, self-fulfilled, and had a positive emotional balance. People who subjectively evaluated their health as bad or very bad in 2012 are usually dissatisfied, unhappy, and live with a negative emotional balance. Those who did not feel safe were usually dissatisfied, unhappy, and emotionally unbalanced. Those who scored higher on the scale of anomie and alienation usually had a negative emotional balance. Optimists were typically satisfied, happy, self-fulfilled people, and showed a positive emotional balance.

TESTING THE HYPOTHESES OF THE RESEARCH

To test our hypotheses we created a summative subjective quality-of-life scale with the aforementioned five sub-scales (having, loving, being, happiness, positive-negative balance). On the summative scale of 0 – 36 higher values represented a favorable subjective quality of life (statistics for the scale were as follows: Chr. A.: 2006: 0.768; 2012: 0.781[3], and the pooled mean: 21.22; st. dev.: 6.79 [N=3356]). The regression analyses conducted on the pooled cross-sectional data in Model I (Table 1) show that the hypothesis is supported by the data and indicates that the subjective quality of life of the population had somewhat declined on average by 2012 compared to before the crisis. The question, however, is whether this claim is supported by social and demographic factors.

3 The QoL scales were developed on the independent samples because of the different wording of the Loving scale.

Table 1. *Regression models for subjective life quality, pooled cross-sectional data, OLS (unstandardized beta parameters, levels of significance)*

	model I.	**model II.**
Year: 2012	**-0,623*** (0,237)**	**0,215 (0,297)**
control variables	*no*	*yes*
Constant (B)	**21,579*** (0,180)**	**20,841*** (0,481)**
N	**3356**	**2539**
Adjusted R2	**0,002**	**0,118**

*Note: standard errors are in parentheses. Model II. controlled by sex, age, type of settlement, level of education, monthly net household income per person, missing cases: listwise. Significance levels: *p<0.10, **p<0.05, ***p<0.01*

Model II shows that when socio-demographic factors are controlled for (age, sex, level of education, level of income, and settlement type), subjective quality of life did not differ significantly when the two periods were compared. This leads us to reject Hypothesis 1; the assumed adverse effects of the crisis – as a period effect – on subjective quality of life were not apparent by 2012. Turning to the changes in subjective quality of life of the dichotomous social groups, we first examined the sub-hypotheses of social integration. Hungarian demographic processes indicate that, starting from the 1980s through to the year 2017, there was a continuous decline in the proportion of marriages and, in parallel with this, the proportion of single people continuously increased. Data show that among the adult population in 2006, 48.7%, and in 2012, 44.1% were married,[4] which explains the deviation in distribution between the two samples from these two years. Examination of presence on the labor market shows that the distribution of non-working individuals for these two years was as follows: student: 2006: 7.6%, 2012: 8.5%; unemployed: 4.7%, 8.2%; permanently sick/disabled: 3.9%, 3.4%; retired: 28.4%, 26.4%; homemaker/others: 10.0%, 6.7%, respectively. Along the dichotomous variables, the distribution of workers was almost the same in both samples (2006: 45.4%, 2012: 46.5%).

The results of the analysis in Table 2 show that married people had a favorable subjective quality of life before the crisis and an advantage of 1.020 index points over their unmarried counterparts, while taking into account the general effect of the recovery period (-0.225) the advantage of married people had grown by 1.033 points by 2012. In the case of presence on the labor market, workers had a -0.163 point disadvantage compared to non-workers in 2006 – while when deducting the general effect of the recovery period (-0.371), the subjective quality of life of workers had increased by 1.332 by 2012. This means that an increase in the quality of life of married individuals compared to unmarried persons had occurred by 2012. Additionally, the situation with the unfavorable quality of life of workers compared to non-workers changed, and had

4 Data can be found at https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_wdsd002.html

become much more favorable for the latter by 2012. Consequently, the increase in the distance between the dichotomous social groups in terms of well-being as an effect of the crisis, as outlined in Sub-hypotheses No.2/a-b, is proven.

Furthermore, before the crisis subjective quality of life was on average higher among those who were getting by with their present income (4.196 index-points) compared to those for whom this was difficult or very difficult. In 2006, the population in good health scored on average 4.701 index-points more than those who felt that their overall subjective health was bad or very bad. Regarding the role of safety, we found that before the crisis those who felt safe in their neighborhood evaluated their well-being as higher (on average, by 2.733 points) compared to those who reported to not feeling safe. However, in these models the differences between the mean values of the groups (B_3) did not show any significant deviation. For this reason, the polarization of the dichotomous vulnerable social groups as an adverse effect of the crisis, as outlined in Sub-hypotheses No.3.a-c, was not confirmed.

Table 2. *Regression models of groups of hypotheses concerning subjective life quality, pooled cross-sectional data, OLS (unstandardized beta parameters, significance levels)*

	(2.a.)	**(2.b.)**	**(3.a.)**	**(3.b.)**	**(3.c.)**
	social integration		**vulnerable social groups**		
2.a. Married	1,020** (0,402)				
2.b. Working		-0,163 (0,432)			
3.a. Getting by with present income			4,196*** (0,378)		
3.b. Good subjective general health				4,701*** (0,503)	
3.c. Feeling of safety					2,733*** (0,448)
Year: 2012	-0,225 (0,409)	-0,371 (0,368)	0,116 (0,357)	-0,812 (0,633)	0,983* (0,527)
Interaction tag	1,033** (0,527)	1,332** (0,514)	0,074 (0,490)	0,925 (0,684)	-0,883 (0,583)
Constants	20,555*** (0,504)	21,040*** (0,493)	20,333*** (0,476)	16,906*** (0,609)	18,820*** (0,583)
N	**2522**	**2503**	**2536**	**2536**	**2513**
Adjusted R2	**0,129**	**0,122**	**0,198**	**0,181**	**0,138**

*Note: standard errors are in parentheses. Reference categories: (2.a.) unmarried, (2.b.) not working, (3.a.) not getting by with present income, (3.b.) poor subjective health, (3.c.) lacking safety, Year: 2006. Models were controlled for: sex, age, type of settlement, level of education, monthly net household income per person. Missing cases: list wise. Significance levels: *p<0.10, **p<0.05, ***p<0.01*

When it comes to personal traits, the outcome was different, as all three of the variables remained significant (Table 3). The optimistic population scored on average 3.406 points more on the subjective quality of life index compared to pessimists before the crisis. Based on the regression equation – and taking into account the general effect of the recovery period (-0.847 points) – the benefits of being optimistic grew by 1.623 index-points for the year 2012. The data presented here thus support Hypothesis No. 4.

Finally, the data verified our expectations and our tests proved the general negative association between quality of life and individual anomie and alienation (Table 3), without the significant impact of the year 2012. Consequently, Hypothesis No. 5 was confirmed.

Although we did not aim to compare the explanatory power of the models, the results of the regression estimations on the hypotheses' groups proved that objective factors (marital status, presence on labor market) played a weaker role. Subjective indicators related to determining subjective quality of life decreased the explained variance, as we expected based on the literature (Michalos-Zumbo, 2002; Spéder-Kapitány, 2002; Gudmundsdottir, 2013). In the next step, we integrated these variables into our integrated model and can now draw conclusions, bearing in mind the above-mentioned facts.

Table 3. *Regression models of groups of hypotheses on subjective life quality, pooled cross-sectional data, OLS (unstandardized beta parameters, significance levels)*

	(4.)	**(5.)**
	personal trait	**anomie- and alienation**
4. Optimistic	3,406*** (0,356)	
Interaction tag	1,623*** (0,477)	
5. Anomie- and alienation scale		-1,347*** (0,057)
Interaction tag		-0,098 (0,076)
Year: 2012	-0,847** (0,363)	1,423* (0,780)
Constants	19,071*** (0,484)	35,665*** (0,689)
N	**2531**	**2482**
Adjusted R2	**0,218**	**0,419**

*Note: standard errors are in parentheses. Reference categories: (4) pessimistic, Year: 2006. Models were controlled for: sex, age, type of settlement, level of education, monthly net household income per person. Missing cases: list wise. Significance levels: *p<0.10, **p<0.05, ***p<0.01*

INTEGRATED MODELS

The subjective quality of life of the population was determined using all the variables involved in the models above. To examine the individual role of each explanatory variable, we had to take into consideration all of the variables using one integrated model (Table 4).

Table 4. *Integrated regression models for subjective life quality, pooled cross-sectional data, OLS (unstandardized beta parameters, significance levels)*

	model I.	model II.
Year: 2012	0,474 (1,033)	0,615 (1,173)
Married	0,270 (0,270)	0,640** (0,314)
Inter	-0,250 (0,354)	0,007 (0,412)
Working	-0,476* (0,270)	-0,633* (0,338)
Inter	0,353 (0,360)	0,711* (0,414)
Getting by with present income	2,794*** (0,279)	2,367*** (0,319)
Inter	0,029 (0,369)	-0,080 (0,420)
Good subjective general health	2,635*** (0,392)	2,316*** (0,429)
Inter	0,035 (0,534)	-0,089 (0,597)
Feeling safe	0,877*** (0,320)	1,045*** (0,360)
Inter	-0,559 (0,410)	-0,646 (0,469)
Optimistic	1,939*** (0,270)	1,625*** (0,301)
Inter	0,781** (0,364)	0,977** (0,414)
Anomie- and alienation Scale	-1,160*** (0,053)	-1,109*** (0,058)
Inter	-0,046 (0,069)	-0,057 (0,079)
Control variables	no	yes
Constants	27,002*** (0,783)	27,541*** (0,920)
N	3133	2404
Adjusted R2	0,510	0,496

*Note: standard errors are in parentheses. Reference categories: 2006, not married, not working, not getting by with present income, poor subjective health, lacking safety, pessimistic. Control variables are the same as we used in Table 3. Missing cases: listwise. Significance levels: *p<0.10, **p<0.05, ***p<0.01*

The main findings show that all explanatory variables were significantly associated with multidimensional subjective quality of life in the integrated models, thus no different results were generated other than those we have already discussed, except of the family status and the presence on the labor market. The well-being benefits of married people declined (0.007 points) for 2012, even though their advantage was 0.640 index points before the crisis. Workers had a -0.633 point disadvantage in terms of subjective quality of life in 2006, while a 0.711 point improvement was detected in 2012. But here the disadvantages and benefits were equalized (-0.633 + 0.711) so the subjective quality of life of the two groups was similar in 2012 (Table 4).

SUMMARY

This paper aimed to investigate the changes in the subjective quality of life of the Hungarian population and also of different social-demographic groups after the recession. We analyzed pooled cross-sectional data by using the difference-in-differences method. Taking into account set-point theory and the adaptation of the population that prevailed during this period, the results may not be surprising. However, before summarizing our findings, we should recall the adverse socioeconomic processes that characterized the period before the crisis (rising unemployment, growing indebtedness of the population, reduction of savings, and decreasing social transfers) and in addition, the decline in subjective well-being that was apparent from 2004 onwards. This might help to explain our results. On the one hand, after a period of recovery (2012) there was no significant difference in the subjective quality of life of individuals compared to the declining trends of 2006. Consequently, we could not prove the existence of our first main explanatory mechanism, the period effect. However, our findings provided empirical support for set-point theory, reaffirming the fact that people's well-being returns to within its typical range after a short deviation as a result of adaptation. On the other hand, we identified that married people and those who were active on the labor market enjoyed a higher quality of life in 2012. First, this means that the existence of marriage and being active on the labor market provided adequate support for overcoming the difficulties of the crisis: married individuals and workers were able to achieve a better quality of life during the recovery period than their non-married/non-working counterparts. Second, it also signals further deterioration in the position of vulnerable groups; consequently, the second explanation is retained. Furthermore, individuals' subjective perceptions according to selected social categories based on the most viable predictors (income adequacy, safety, and health) were not significantly different compared to the pre-crisis period. Therefore, our third posited explanatory mechanism did not prove to be relevant.

Based on the integrated model we claim that, due to combined effects, the earlier differences among social groups have disappeared, apart from in the case of having an optimistic attitude. This result is surprising if we consider the earlier widespread pessimism in Hungarian society, that was detected in many works during in the 1990s.

Overall, the study is novel in three ways: first, it examined not simply the effect of the economic crisis of 2008 on subjective quality of life, but also its effect on the differences between social groups; second, the research developed a new multidimensional index for evaluating subjective quality of life; and third, it provided new evidence for set-point theory. Finally, accounting the effect of the year of 2010 can be a new research goal, to highlighting the real life quality differences among different social groups employing the difference-in-difference-in-differences (DDD) method, and also with selecting a new benchmarking period before the crisis.

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APPENDIX

*A.**Table 1.** Distribution of dichotomous, control and explanatory variables in the pooled cross-sectional sample (Valid %, N, unweighted data)*

	Valid %	**N**
Male	43,3	3532
under 30 years	18,6	3517
30-39	16,5	3517
40-49	16,5	3517
50-59	17,1	3517
60-69	15,6	3517
70 years or older	15,8	3517
Big city (+suburbs or outskirts of a big city)	28,1	3528
Town or a small city	36,8	3528
Country village +farm or home in the countryside	35,1	3528
Primary education or less	35,3	3520
Vocational secondary	25,8	3520
Secondary school	23,4	3520
Diploma (or upper)	15,5	3520
Married	54,2	3487
Working	44,0	3476
Getting by with present income	48,2	3490
Good subjective general health	84,3	3530
Feeling safe	73,5	3466
Optimistic	50,0	3510

*A.**Table 2.** Control and explanatory describing statistics in the pooled cross-sectional sample*

	N	Minimum	Maximum	Mean	Std. Deviation
Male	3532	0,00	1,00	0,4394	0,49638
under 30 years	3525	0,00	1,00	0,2041	0,40309
30-39	3525	0,00	1,00	0,1648	0,37102
40-49	3525	0,00	1,00	0,1785	0,38296
50-59	3525	0,00	1,00	0,1742	0,37931
60-69	3525	0,00	1,00	0,1442	0,35132
70 years or older	3525	0,00	1,00	0,1343	0,34106
Big city (+suburbs or outskirts of a big city)	3529	0,00	1,00	0,2689	0,44347
Town or a small city	3529	0,00	1,00	0,3652	0,48154
Country village+farm or home in the countryside	3529	0,00	1,00	0,3659	0,48175
Primary education or less	3523	0,00	1,00	0,3452	0,47550
Vocational secondary	3523	0,00	1,00	0,2618	0,43967
Secondary school	3523	0,00	1,00	0,2410	0,42773
Diploma (or upper)	3523	0,00	1,00	0,1520	0,35912
Married	3492	0,00	1,00	0,5752	0,49438
Working	3479	0,00	1,00	0,4578	0,49829
Getting by with present income	3494	0,00	1,00	0,4870	0,49990
Good subjective general health	3530	0,00	1,00	0,8533	0,35382
Feeling safe	3473	0,00	1,00	0,7391	0,43920
Optimistic	3510	0,00	1,00	0,5107	0,49996
Anomie- and alienation Scale	3423	4	21	9,5482	2,79118

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CORRUPTION AND DEVELOPMENT: A COMPARATIVE APPROACH TO SOCIOECONOMIC AND POLITICAL DIMENSIONS WORLDWIDE

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ABSTRACT *The present study investigates relevant economic, social and political dimensions of development worldwide, focusing on (apparent and latent) links between perceived corruption, economic and human development, government effectiveness and the quality of the political system taken as representative variables of countries' social systems. These variables were selected as the basic determinants of the level of overall development in a country, since combinations of these factors determine clusters of countries with different development patterns. The results of this study indicate that effective development policies require integrated strategies that incorporate efforts to reduce corruption and increase human development and government effectiveness. These strategies are sustainable in the long run when associated with institutional transformations. More specifically, if democracy is not consolidated and the political system is not grounded on the basis of freedom, socioeconomic development cannot be achieved and maintained in the long term, even with a high level of per-capita income.*

KEYWORDS: *corruption, human development, government effectiveness, political system, worldwide dynamics*

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INTRODUCTION

Development has been mainly evaluated from an economic perspective, with social and institutional aspects being underestimated for several reasons, including the fact that the latter cannot be as easily measured as the former. Economic figures are assessed in almost all countries with comparable approaches and relatively simple and widely acceptable indexes such as income per capita, while the social and institutional aspects of human action can only be successfully expressed through more complicated procedures about which there is only partial agreement. However, positive and normative interest in the social and institutional dimensions of development remains high, as economic growth is recognized as a partial condition of the wealth of nations.

Wealth equality, a fair distribution of economic benefits, the effective reduction of corruption, good governance, better social security, high-quality health and education systems are relevant factors characterizing the level of overall development in modern societies. A higher level of governance, as it is usually perceived, through more effective government and high standards of political rights and democracy allow nations to satisfy social needs more efficiently, so that citizens may live in a comfortable, fair and secure sociopolitical environment. The recent worldwide economic crisis has proved that what often lies behind an economic crisis is a hidden social and institutional crisis. Economic development is not guaranteed in the long term unless it is associated with a high level of social and political development. The countries of the world affected more deeply by the economic crisis and sovereign debt crisis seem to be those in which the level of social and political development are moderate or even low. This statement is not surprising since social cohesion and democratic institutions help with discovering and implementing appropriate solutions for overcoming economic problems.

International agencies have recently developed methodologies for measuring variables that express the social and political dimensions (or aspects) of development. These empirical frameworks consider the overall development of countries as a multidimensional phenomenon associated with a variety of social, economic and institutional factors, including per-capita income, human development, government effectiveness, reduction of income (and wealth) inequalities, social transformations, reduced corruption and democratic political systems.

The objective of the present study is to investigate a broad range of factors (income per capita, human development, government effectiveness, political freedom in the forms of political rights and civil liberties, and corruption), intended as relevant indicators of the level of a country's development. Based

on a preliminary investigation by Rontos et al. (2013), the present study focuses on the way multiple combinations of these factors determine distinct development patterns worldwide. Our analysis reveals that these factors are partly correlated, and inter-linkages are particularly important in determining the extent of the development of individual countries. Assuming that political rights and civil liberties represent the level of political development of countries, while the remaining variables represent the socioeconomic dimension of overall development, a multivariate strategy was implemented with the aim of (i) identifying relevant, latent components of development related to the factors described above, and (ii) profiling similarities among countries and homogeneous clusters across continents based on the adopted indicators.

EXPLORING MULTIPLE DIMENSIONS OF SOCIOECONOMIC DEVELOPMENT

The most widely used indicator of level of economic development is real income per-capita. Although criticized as an inadequate proxy of the level of overall development – mainly as an inefficient measure of living standards and quality of life prevailing in a country – per-capita income is still recognized as the best single available measure of average level of economic development. The level of overall development is also associated with the degree of human development, widely considered a wider notion than economic development. Human development refers to the expansion of people's freedoms and capabilities to live their lives as they choose (UNDP 2009). Human development is both a process and an outcome. It not only involves the process through which human choices are enlarged, but it also focuses on the outcomes of the enlarged choices (UNDP 2002).

Overall development is also associated with the degree of government effectiveness. An effective public sector promotes all three dimensions of development. Kaufmann et al. (2009) define governance as "the traditions and institutions by which authority in a country is exercised. This includes the processes by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them."

A strong connection also exists between the level of overall development and the quality of the political system. Underdevelopment is widely considered to be both a symptom and a cause of the malfunctioning of democratic institutions (Warren 2004). Moreover, democracy and consequent public accountability

reduce the costs of development. In a sense, the political system or the "political macrostructure" is responsible for determining the political motivation of all players in a state system. The reaction to these factors determines the behavior of state bureaucracy (Lederman et al. 2005). As a result, a highly developed and well-functioning democracy serves as a tool for increasing the level of overall development (Zhang et al. 2009). Similarly to the vision of political science, the new wave of institutional economics argues that institutions play a decisive role in sustainable development and growth, ultimately claiming that democracy stimulates growth in a direct (or indirect) way (e.g. Acemoglu et al. 2002).

A relevant variable associated with economic, social and institutional dimensions of development is the level of perceived (public-sector) corruption in a country, indicating the abuse of entrusted power for private gain. It has been acknowledged from the first stages of human civilization that whoever is in a position to exercise power may also be in a position to use their public office for individual benefit. Public-sector corruption is usually defined as the abuse of public power for private benefit (Tanzi 1998, 2000) or the abuse of public office for private gain (Martinez-Vazquez et al. 2007). Johnston (2001) has formulated an analysis of the concept and the various definitions of corruption. The World Bank has defined public sector corruption as the abuse of public authority for private interest (World Bank 1997). OECD defines public sector corruption as the misuse of public office, roles or resources for private benefit, material or otherwise (OECD 1996). While related to personal gain on some occasions, corruption can have several facets, such as bribery, embezzlement, fraud, extortion and nepotism (Amundsen 1999). Beneficiaries may include so-called third parties, namely family, friends or the political party to which the individual belongs. While corruption is seen as a "disease" inherent to public power and an indication of bad governance (Treisman 2000; Paldam 2002; de Vaal – Ebben 2011; Lalountas et al. 2011), the "grease theory" – which argues that corruption "lubricates the wheels" and fosters efficiency – might complicate these conclusions, proposing a more general view of the phenomenon which is widely diffused across all continents (Leff 1964; Huntington 1968; Lambsdorff 2007; Aidt 2009). Although corruption can be observed in both the private and the public sector, the vast bulk of economic literature examines only public sector corruption, for two main reasons. First, the phenomenon is mainly associated with the public sector, and second, widely accepted private-sector corruption indices have not yet been constructed, rendering the relevant empirical research extremely difficult.

Corruption is a complex and multidimensional phenomenon with several causes and effects and numerous associated factors. The most important of these are level of economic development, type of political authority, quality of

institutional framework, effectiveness of justice system, degree of globalization, level of competition, structure and size of public sector, as well as cultural quality, geographical location and history. In summary, widespread corruption largely indicates the existence of institutional and political weaknesses as well as economic and social underdevelopment. Corruption has been accepted as the single most significant barrier to both democratization and economic development (Rose-Ackerman 1999; Sung 2002; Rontos et al. 2013).

DATA AND METHODOLOGY

Data

Our analysis is based on six variables made available for 167 countries, referring to the year 2010 with no missing data. In regard to the ensemble of indicators adopted in this study, more recent data sometimes replaced missing values for some of the 167 countries considered in the analysis. Variables were derived from official statistics and other reliable international data sources, as explained in the following sub-sections. The final data matrix prepared by the authors is available for further studies upon request.

Corruption

The corruption perceptions index (CPI), widely used in comparative investigations and provided annually by the nongovernmental organization Transparency International, was incorporated into this study with elementary country data referring to the year 2010. The CPI is a composite index based on a variety of data derived from 13 surveys carried out by 10 independent organizations that measure corruption on a scale from 0 to 10, where 0 represents the highest possible corruption level. High scores indicate a low perceived level of corruption in a given country. Despite the fact that the CPI is not the outcome of the objective quantitative measurement of corruption – representing the most relevant conceptual limitation of this indicator – it reveals how this phenomenon is perceived within local societies. The major strength of the CPI lies in the combination of multiple data sources in a single index, a fact that increases the reliability of each country's score (Lambsdorff 2006).[2]

2 For an extended analysis and assessment of the various indicators of corruption, see mainly UNDP (2008).

Per-capita income

Per-capita Gross National Income in purchasing power parity or current international dollars ($GNI_{pc,ppp}$) is used to approximate the level of economic development in each country. $GNI_{pc,ppp}$ is gross national income (GNI) converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GNI as a US dollar has in the United States.[3] $GNI_{pc,ppp}$ is a key indicator in economic analyses when the objective is to compare broad differences between countries in living standards since purchasing power parities take into account the relative cost of living in various countries. $GNI_{pc,ppp}$ is an indicator widely used in international comparisons of economic development (World Bank 2010a).

Human development

The Human Development Index (HDI) is a summary estimation of the level of human development based on non-income measures that integrates measures of life expectancy in birth, mean years of schooling, expected years of schooling and gross national income (GNI) per-capita. Estimated by the United Nations Development Program (UNDP), it measures the average achievements in a given country in three relevant dimensions of human development: a long and healthy life, access to knowledge, and a decent standard of living. Despite its inherent limitations, the index is a useful comparative measure of the level of human development. Based on the HDI, countries are classified into three categories: (i) high human development with HDI > 0.8, (ii) medium human development with 0.5 < HDI < 0.8, and (iii) low human development with HDI < 0.5. The data used refer to the year 2010.

Government effectiveness

To express Government Effectiveness, the relevant World Bank government effectiveness indicator (GE) is used. This indicator is very useful because it aims at capturing the quality of public services provided, the quality of the civil service and its degree of independence from political pressure, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The aim of the indicator is therefore to capture

3 See http://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD.

the capacity of the public sector to implement sound policies. GE is one of the six indicators of broad dimensions of governance (the so-called worldwide governance indicators (WGI)) that have covered over 200 countries since 1996 and are produced by Kaufmann et al. (2010) and the World Bank (2010b). Values of GE range between -2.5 and 2.5. Actually, the variable has been standardized (with mean 0 and standard deviation 1), so that cross-country- and time-related differences in the measurement scale are avoided. Higher values correspond to better governance. This indicator assesses subjective perceptions regarding government effectiveness and is not the outcome of quantitative measurement.

Political rights

The "political rights" index (PR) provided by the organization Freedom House (2010) integrates three indicators; namely, electoral process, political pluralism, and participation/functioning of government. The index is estimated by the Freedom House organization (2013). The PR index ranges from 1 (a very free country) to 7 (a country which is not free). According to the PR index, countries are characterized as Free (F) if they score 1.0-2.5 on the 1-7 scale, Partly Free (PF) if they score 3.0-5.0 on the 1-7 scale, and Not Free (NF) if they score 5.5-7.0 on the 1-7 scale.

Civil liberties

The "Civil Liberties" index (CL) is estimated by the Freedom House organization (2013)[4] and is based on the evaluation of four partial indicators, namely, freedom of expression and belief, associational and organizational rights, rule of law, personal autonomy, and individual rights. According to the CL index, countries are characterized as free (F) if they score 1.0-2.5 on the 1-7 scale, partly free (PF) if they score 3.0-5.0 on the 1-7 scale, and not free (NF) if they score 5.5-7.0 on the 1-7 scale.

4 For more details, see Methodological Summary, Freedom House (2013).

Methodology

The collected variables were standardized prior to analysis. A three-step multivariate strategy based on a pair-wise Spearman non-parametric rank correlation analysis, a Principal Component Analysis (PCA), and a non-hierarchical Cluster Analysis (CA) was developed with the aim of characterizing the socioeconomic and political system of each country according to the selected economic and non-economic features that describe the level of overall development in each country. Multivariate analysis allows for a comprehensive classification of countries based on partly redundant input variables (e.g. Salvati 2013; Pili et al. 2017; Duvernoy et al. 2018).

Non-parametric correlations

A pairwise Spearman non-parametric co-graduation analysis was carried out separately for each variable to test if significant correlations exist over the whole ensemble of countries (n = 167). Significant correlations at $p < 0.001$ were identified after Bonferroni's correction for multiple comparisons (Zitti et al. 2015). A non-parametric analysis was preferred to a classical parametric analysis (e.g. using Pearson correlation coefficients) with the aim of detecting both linear and non-linear significant pairwise relationships between variables, without stringent requisites about normality (Rontos et al. 2016).

Principal Component Analysis

A PCA was undertaken on the six variables available for the investigated countries in order to extract and summarize the latent factors describing the socioeconomic context and the possible relationships with corruption and to complement the results obtained from the non-parametric Spearman correlation analysis. As the PCA was based on the correlation matrix, the number of significant axes (m) was chosen by retaining the components with eigenvalue > 1. Outputs of the PCA include eigenvalues of the main components, variable loadings, and country scores.

K-means Clustering

Non-hierarchical *k*-means clustering was carried out with the aim of separating countries into a few groups with homogeneous socioeconomic and political patterns and corruption levels. The best partition (i.e. the optimal number of clusters for group separation) was chosen according to the Cubic Clustering Criterion that works through maximizing the proportion of within-group variance to between-group variance. Outputs of the CA include the average of each of the six considered variables by cluster, together with cluster membership and the multivariate distance from the centroid of each cluster by country. An Analysis of Variance (ANOVA) was finally used to identify which variables contribute most to the cluster differentiation.

RESULTS

Non-parametric correlations

Pairwise Spearman co-graduation analysis indicates the existence of important relationships among the considered variables (Table 1). The CPI was correlated to all the remaining variables, increasing with GE, GNI and HDI and decreasing with CL and PR. The highest correlation coefficient was found for the relationship between GNI and HDI, possibly indicating that gross national income can be considered a proxy for the level of socioeconomic development in the countries investigated in the present study. While being positively correlated to CL, PR was negatively associated with GE. Finally, GE was negatively correlated to CL. In general, the relationships between the above variables are the ones postulated by relevant theory.

Table 1 *Pairwise Spearman non-parametric correlation analysis between the variables investigated in each country (bold indicates significant correlations at $p < 0.001$ after Bonferroni's correction for multiple comparisons).*

Variable	PR	GNI	HDI	GE	CL
CPI	-0.66	0.75	0.75	0.92	-0.70
PR		-0.46	-0.56	-0.65	0.94
GNI			0.95	0.80	-0.52
HDI				0.83	-0.61
GE					-0.70

Source: Authors' elaboration using survey dataset, various statistical sources; see Section Data.

Principal Component Analysis

PCA extracted two relevant axes, accounting respectively for 73.6% and 16.8% of total variance with a cumulated variance explained by the two main axes of more than 90% (Table 2). All variables were found to be associated with factor 1 (PR and CL with positive loadings, the remaining four with negative loadings) which indicates an axis of economic development together with increasing corruption level. However, the highest contributions to the axis are from GE, CPI and HDI. Factor 2 is negatively associated with civil liberties and political rights, possibly indicating that the cultural and institutional factors influencing these variables are only partly correlated to the level of socioeconomic development in a country.

Table 2 *Summary results of the Principal Component Analysis applied to the matrix composed of countries (by row) and the six investigated variables (by column)*

Variable	Component loadings		Contribution	
	PC 1	PC 2	PC 1	PC 2
CPI	-0.92	-0.19	0.19	0.03
PR	0.76	-0.62	0.13	0.38
GNI	-0.82	-0.48	0.15	0.22
HDI	-0.85	-0.25	0.16	0.06
GE	-0.95	-0.14	0.21	0.02
CL	0.82	-0.54	0.15	0.28
Variance (%)			73.6	-
Cumulated variance (%)			16.8	90.4

Source: Authors' elaboration using survey dataset, various statistical sources; See Section Data.

Table 3 reports the countries' scores for the two main components. Developed countries with consolidated democracies had negative scores on both the first and second axes while economically-disadvantaged and poor countries with very unstable political systems are clustered along the positive side of the first and second axes.

Table 3 *Component scores for each country for the two principal components*

Country	PC1	PC2	Country	PC1	PC2	Country	PC1	PC2
Afghanistan	1.52	-0.33	Germany	-1.74	-0.24	Nigeria	0.99	0.31
Albania	0.04	0.39	Ghana	-0.06	1.66	Norway	-2.14	-1.00
Algeria	0.65	-0.93	Greece	-0.80	0.37	Oman	-0.06	-1.86

Country	PC1	PC2	Country	PC1	PC2	Country	PC1	PC2
Angola	1.14	-0.37	Guatemala	0.56	0.22	Pakistan	0.87	0.16
Argentina	-0.26	0.72	Guinea	1.53	-0.65	Panama	-0.43	1.01
Armenia	0.50	-0.61	Guinea–Bissau	1.03	0.78	Papua New Guinea	0.72	0.85
Australia	-1.89	-0.34	Guyana	0.17	1.02	Paraguay	0.42	0.79
Austria	-1.81	-0.31	Haiti	1.14	0.42	Peru	-0.07	0.65
Azerbaijan	0.74	-0.89	Honduras	0.59	0.24	Philippines	0.33	0.43
Bahrain	-0.08	-1.83	Hong Kong	-1.50	-2.04	Poland	-0.96	0.82
Bangladesh	0.71	0.79	Hungary	-0.91	0.86	Portugal	-1.17	0.55
Barbados	-1.34	0.54	Iceland	-1.69	-0.01	Qatar	-1.13	-3.86
Belarus	0.88	-1.65	India	0.18	1.07	Romania	-0.33	0.69
Belgium	-1.65	-0.16	Indonesia	0.18	1.02	Russia	0.50	-1.31
Benin	0.38	1.71	Iran	0.76	-1.30	Rwanda	0.81	-0.51
Bhutan	0.19	-0.42	Iraq	1.16	-0.41	Samoa	-0.17	1.08
Bolivia	0.26	0.69	Ireland	-1.64	-0.08	Sao Tome and Principe	0.30	1.59
Bosnia Herzegovina	0.24	0.17	Israel	-1.22	0.07	Saudi Arabia	0.29	-2.32
Botswana	-0.43	0.35	Italy	-0.89	0.20	Senegal	0.52	1.05
Brazil	-0.27	0.85	Jamaica	-0.12	0.66	Serbia	-0.26	0.82
Brunei	-0.59	-2.85	Japan	-1.54	-0.40	Seychelles	-0.42	-0.29
Bulgaria	-0.33	0.72	Jordan	0.36	-1.11	Sierra Leone	0.87	1.40
Burkina Faso	0.83	0.67	Kazakhstan	0.51	-1.11	Singapore	-1.57	-3.05
Burundi	1.22	0.58	Kenya	0.74	0.48	Slovakia	-0.95	0.78
Cambodia	1.06	-0.39	Kiribati	-0.01	1.98	Slovenia	-1.31	0.35
Cameroon	1.21	-0.64	Korea (South)	-1.18	0.03	Solomon Islands	0.65	0.76
Canada	-1.91	-0.39	Kuwait	-0.54	-1.77	South Africa	-0.29	0.90
Cape Verde	-0.32	1.77	Kyrgyzstan	0.92	-0.54	Spain	-1.32	0.24
Cent. African Republic	1.31	0.27	Laos	1.26	-0.98	Sri Lanka	0.31	-0.03
Chad	1.65	-0.56	Latvia	-0.74	0.72	Sudan	1.64	-1.00
Chile	-1.19	0.73	Lebanon	0.23	-0.27	Swaziland	0.92	-0.93
China	0.65	-1.64	Lesotho	0.44	0.99	Sweden	-1.99	-0.48
Colombia	0.06	0.04	Liberia	0.91	1.05	Switzerland	-2.04	-0.72
Comoros	1.01	1.06	Libya	0.97	-2.04	Syria	0.98	-1.31
Congo – Brazzaville	1.39	-0.04	Lithuania	-0.91	0.89	Tajikistan	0.98	-0.50
Costa Rica	-0.70	1.22	Luxembourg	-2.07	-0.98	Tanzania	0.62	0.79

Country	PC1	PC2	Country	PC1	PC2	Country	PC1	PC2
Cote d'Ivoire	1.29	-0.16	Madagascar	0.95	-0.05	Thailand	0.28	-0.47
Croatia	-0.69	0.68	Malawi	0.63	0.81	Togo	1.07	0.41
Cyprus	-1.41	0.22	Malaysia	-0.28	-0.69	Tonga	0.33	0.02
Czech Republic	-1.07	0.64	Maldives	0.33	0.30	Trinidad and Tobago	-0.51	0.36
Denmark	-1.94	-0.47	Mali	0.66	1.58	Tunisia	0.41	-1.48
Djibouti	1.00	-0.06	Malta	-1.17	0.55	Turkey	-0.25	0.05
Dominica	-0.76	1.19	Mauritania	1.13	-0.31	Turkmenistan	1.32	-1.53
Dominican Republic	0.01	1.11	Mauritius	-0.72	0.79	Uganda	0.86	0.26
Ecuador	0.24	0.56	Mexico	-0.22	0.41	Ukraine	0.17	0.92
Egypt	0.68	-0.83	Moldova	0.43	0.46	United Arab Emirates	-0.62	-2.83
El Salvador	-0.04	0.77	Mongolia	0.14	1.36	United Kingdom	-1.64	-0.09
Equatorial Guinea	1.30	-1.78	Montenegro	-0.27	0.43	United States	-1.75	-0.44
Eritrea	1.63	-0.96	Morocco	0.50	-0.17	Uruguay	-1.01	0.91
Estonia	-1.22	0.61	Mozambique	0.77	1.00	Uzbekistan	1.25	-1.44
Ethiopia	0.99	0.03	Namibia	-0.19	1.06	Vanuatu	0.01	1.26
Finland	-1.98	-0.39	Nepal	0.84	0.59	Venezuela	0.56	-0.37
France	-1.54	0.00	Netherlands	-1.92	-0.47	Vietnam	0.87	-0.94
Gabon	0.69	-1.00	New Zealand	-1.84	-0.14	Yemen	1.15	-0.30
Gambia	0.94	-0.08	Nicaragua	0.69	0.36	Zambia	0.72	0.85
Georgia	0.11	-0.20	Niger	1.06	0.50			

Source: Authors' elaboration using survey dataset, various statistical sources; See Section Data.

K-means clustering

Cluster analysis identified four homogeneous groups of countries (Table 4). Two groups include highly developed countries. The full list of countries according to the cluster membership is shown in Table 5. The greatest dissimilarities exist between rich non-European countries and economically-disadvantaged countries, and between economically-disadvantaged countries and emerging countries. A considerable distance exists also between developed European countries and disadvantaged countries. A non-parametric analysis of variance identifies variables used in k-means clustering that differ significantly across the clusters (Table 5). The variables contributing the most to cluster differentiation are GNI, GE and CL.

The cluster with the highest number of countries (n = 90) includes the economically disadvantaged and poor countries in Africa, Asia and Latin America with the lowest CPI score (indicating the highest level of corruption) and the highest PR and CL scores (indicating the lowest political rights and civil liberties observed across the selected countries). Per capita GNI is less than 4,000 international dollars per year and HDI is the lowest among clusters, together with a low GE. Examples of countries belonging to this cluster are Cape Verde, Congo, Guyana, Honduras, Kiribati, Pakistan, Samoa and Uzbekistan.

Table 4 *Results of k-means clustering: average value by variable and group*

Cluster	#	CPI	PR	GNI	HDI	GE	CL
Developed/consolidated countries, mainly European Union countries (1)	24	7.25	1.21	33427	0.88	1.42	1.38
Affluent countries, mainly non-European Union countries (3)	10	7.46	3.60	54718	0.86	1.35	2.90
Emerging countries (2)	43	4.21	2.93	16214	0.76	0.21	2.73
Disadvantaged countries (4)	90	2.80	4.32	3607	0.54	-0.63	4.06
Kruskal-Wallis test (p level, * $p < 0.05$, ** $p < 0.01$)	-	*	*	**	*	**	**

Note: The number in parenthesis indicates cluster label, as reported in Table 5. Kruskal-Wallis non-parametric analysis of variance was run to identify significant differences in the statistical distribution of each of the six variables among clusters.
Source: Authors' elaboration using survey dataset, various statistical sources, See Section Data.

A total of 43 countries were classified as emerging countries with a considerably higher economic level and higher social and political development compared to the previous cluster, but unstable political systems and the worst government effectiveness. CPI average score is moderately low, indicating quite strong perceptions of level of corruption together with relatively high PR and CL scores, indicating a modest level of political rights and civil liberties. On average, per-capita GNI is higher than 15,000 international dollars per year with an intermediate score for the level of human development. Examples of countries belonging to this cluster are Argentina, Bahrain, Chile, Brazil, China, India, Mexico, Russia and Saudi Arabia.

Only ten countries were classified as affluent countries with high levels of economic development (the highest GNI per-capita; on average, 54,718 international dollars) relatively high government effectiveness and a fairly good level of human development. However, in some of these countries both PR and CL are relatively high, suggesting heterogeneity in the political systems of the two sub-classes participating in the cluster, i.e. (i) high-income and firmly democratic countries (United States, Luxembourg, Switzerland and Norway), and (ii) high-income and partly free (Hong Kong, Kuwait and Singapore) or not

free countries (United Arab Emirates, Brunei, and Qatar). Interestingly, the CPI average score is the highest observed in the first sub-class (8.0), indicating low or very low levels of corruption. In the second sub-class, the related countries are associated with higher levels of corruption (6.5) than the first, with the exception of Singapore (9.3), which is considered one of the least corrupted countries in the world.

Finally, 24 countries were classified as developed and consolidated democracies, located mainly in the European Union with high economic and social development and the highest HDI, on average. PR and CL both reach the highest score, indicating the highest level of political rights and civil liberties. The CPI average score is similar to that observed for the affluent, mainly non-European Union countries and indicates a low corruption level with the highest government effectiveness among the clusters. Examples of countries belonging to this cluster are Australia, Austria, Belgium, Canada, Finland, Greece, Israel, Italy, Japan, Netherlands, New Zealand, Spain, Sweden, United Kingdom, France, Germany and Denmark.

Table 5 *Cluster membership by country and distance from the cluster's centroid*

Country	Cluster		Country	Cluster		Country	Cluster	
	#	Distance		#	Distance		#	Distance
Afghanistan	4	1.1	Germany	1	1.8	Nigeria	4	0.6
Albania	4	2.0	Ghana	4	0.8	Norway	3	1.3
Algeria	4	1.8	Greece	1	2.5	Oman	1	3.3
Angola	4	0.6	Guatemala	4	0.4	Pakistan	4	0.3
Argentina	2	0.4	Guinea	4	1.1	Panama	2	1.4
Armenia	4	0.8	Guinea–Bissau	4	1.0	Papua New Guinea	4	0.5
Australia	1	1.3	Guyana	4	0.1	Paraguay	4	0.6
Austria	1	2.4	Haiti	4	1.0	Peru	4	2.3
Azerbaijan	4	2.3	Honduras	4	0.1	Philippines	2	0.1
Bahrain	2	2.0	Hong Kong	3	3.0	Poland	2	1.1
Bangladesh	4	0.7	Hungary	2	1.3	Portugal	1	3.3
Barbados	2	1.0	Iceland	1	1.8	Qatar	3	8.9
Belarus	2	1.2	India	2	0.1	Romania	2	0.9
Belgium	1	1.8	Indonesia	4	0.2	Russia	2	1.1
Benin	4	0.8	Iran	2	2.0	Rwanda	4	1.0
Bhutan	4	0.6	Iraq	4	0.1	Samoa	4	0.3

Country	Cluster #	Distance	Country	Cluster #	Distance	Country	Cluster #	Distance
Bolivia	4	0.4	Ireland	1	0.1	Sao Tome Principe	4	0.7
Bosnia Herzegovina	4	2.1	Israel	1	3.3	Saudi Arabia	2	2.7
Botswana	2	1.1	Italy	1	0.8	Senegal	4	0.7
Brazil	2	2.2	Jamaica	4	1.6	Serbia	2	2.2
Brunei	3	2.0	Japan	1	0.4	Seychelles	2	2.5
Bulgaria	2	1.2	Jordan	4	0.9	Sierra Leone	4	1.1
Burkina Faso	4	1.0	Kazakhstan	2	2.4	Singapore	3	0.9
Burundi	4	1.2	Kenya	4	0.8	Slovakia	2	2.2
Cambodia	4	0.6	Kiribati	4	0.0	Slovenia	1	3.0
Cameroon	4	0.5	Korea (South)	1	2.0	Solomon Islands	4	0.6
Canada	1	1.9	Kuwait	3	0.6	South Africa	2	2.5
Cape Verde	4	0.0	Kyrgyzstan	4	0.6	Spain	1	1.0
Cent. African Republic	4	1.2	Laos	4	0.5	Sri Lanka	4	0.6
Chad	4	0.9	Latvia	2	0.1	Sudan	4	0.6
Chile	2	0.6	Lebanon	2	1.1	Swaziland	4	0.8
China	2	1.6	Lesotho	4	0.7	Sweden	1	2.6
Colombia	4	2.2	Liberia	4	1.3	Switzerland	3	1.9
Comoros	4	1.0	Libya	2	0.1	Syria	4	0.6
Congo – Brazzaville	4	0.2	Lithuania	2	0.6	Tajikistan	4	0.6
Costa Rica	2	2.1	Luxembourg	3	2.7	Tanzania	4	0.9
Cote d'Ivoire	4	0.7	Madagascar	4	1.1	Thailand	4	1.9
Croatia	2	0.9	Malawi	4	1.1	Togo	4	1.1
Cyprus	1	1.2	Malaysia	2	0.9	Tonga	4	0.4
Czech Republic	2	2.9	Maldives	4	1.7	Trinidad Tobago	2	3.3
Denmark	1	3.0	Mali	4	1.1	Tunisia	4	2.2
Djibouti	4	0.5	Malta	2	3.2	Turkey	2	0.4
Dominica	2	1.8	Mauritania	4	0.5	Turkmenistan	4	1.6
Dominican Republic	4	2.2	Mauritius	2	1.1	Uganda	4	1.0
Ecuador	4	1.7	Mexico	2	0.8	Ukraine	4	1.2
Egypt	4	1.0	Moldova	4	0.1	United Arab Emir.	3	3.2
El Salvador	4	1.2	Mongolia	4	0.0	United Kingdom	1	0.8
Equatorial Guinea	2	2.3	Montenegro	2	1.5	United States	3	3.0

Country	Cluster		Country	Cluster		Country	Cluster	
	#	Distance		#	Distance		#	Distance
Eritrea	4	1.3	Morocco	4	0.4	Uruguay	2	1.2
Estonia	2	1.2	Mozambique	4	1.1	Uzbekistan	4	0.2
Ethiopia	4	1.1	Namibia	4	1.1	Vanuatu	4	0.3
Finland	1	1.3	Nepal	4	1.0	Venezuela	2	1.8
France	1	0.4	Netherlands	1	3.3	Vietnam	4	0.2
Gabon	2	1.4	New Zealand	1	1.9	Yemen	4	0.5
Gambia	4	0.7	Nicaragua	4	0.4	Zambia	4	0.9
Georgia	4	0.5	Niger	4	1.2			
Developed/consolidated countries, EU			Code 1	Affluent countries, mainly non-EU			Code 3	
Emerging countries			Code 2	Disadvantaged countries			Code 4	

Source: Authors'elaboration using survey dataset, various statistical sources; See Section Data.

DISCUSSION

The analysis presented in this study highlights that the level of economic development, the perception of the level of corruption, the degree of human development, the extent of government effectiveness and the quality of the existing political system are important dimensions shaping overall developmental patterns worldwide. Empirical results corroborate earlier assumptions, demonstrating that corruption is low where all other factors considered here are high (level of economic development, degree of government effectiveness, quality of human development and political democracy). Corruption is also correlated to the nature of polity and political institutions, indicating that a well-functioning democracy may serve as a relevant tool for a country's development. Based on these findings, social and political efforts should be made – in addiction to strictly economic policies – to increase or consolidate the level of overall development. This statement is in line with the observed correlation between governance effectiveness and CPI, possibly indicating the role of the state in the creation of a "fair" society, reconnecting to the assumptions mentioned above. Improving the quality of public services, increasing the independence of state bureaucracy from political pressures, improving the effectiveness of processes of policy formulation (and implementation) and the credibility of the government's commitment to such policies reduces the motives of voters, state officials and politicians to resort to corruption. As a result, these policies may increase overall development.

Per-capita income is strongly correlated with the degree of corruption worldwide. High values of $GNI_{pc,ppp}$ are associated with high values of CPI,

indicating a low perceived level of corruption. However, the effective control of corruption should not be misinterpreted and considered a "luxury good" that people demand once their incomes increase to a certain level (Sioussiouras – Vavouras 2012). This is achieved only through the adoption and effective implementation of the appropriate long-term economic, social and political processes. The level of corruption is particularly high in low-income countries because corruption is considered, to some extent, to be a "survival strategy." In these countries, increasing personal income is a strong motive and is becoming stronger due to conditions of utter deprivation and low public sector salaries. In order to survive and support their families, low-paid public sector employees may need to moonlight or accept small bribes, especially when their jobs are associated with a high degree of uncertainty, mainly due to political instability, that reduces the probability of future wage appropriation. According to this line of thought, corruption is a "disease" caused by poverty, or a by-product of poverty that only diminishes when economies develop, as the multivariate analysis implemented in our study may demonstrate. A high level of human development is positively correlated with all remaining factors considered in this study. Improving quality of life and rising levels of education, apart from rising incomes, also increase the level of overall development. Investments into human capital should be considered the most productive form of investment associated with overall development.

The political system seems to be another critical factor that affects the level of overall development worldwide. A strong negative correlation was observed between (i) PR and CL and (ii) CPI and GE. The higher the PR and CL (that is, the more a country is associated with reduced freedom), the higher the corruption and the lower the government effectiveness. The political system seems to be less well associated with economic development as expressed by GNI in the present study, possibly due to high heterogeneity in countries' datasets.

Consequently, the long-lasting and true democratic forms of government and the establishment of a genuine democratic tradition prove to be decisive factors, guaranteeing a high overall development level, contributing specifically to a decrease in corruption and government effectiveness levels. The smooth functioning of democratic institutions and civil liberties is thus considered a prerequisite for achieving and maintaining high levels of development. Notions such as transparency, collectivism, rule of law, freedom of expression, association and organization, constitute the ingredients for a successful and smooth operation of a lawful state (Rothstein – Teorell 2008). Western-type democracies owe their prosperity and overall development to a great extent exactly to these factors, which are partly redundant – as Principal Component Analysis has outlined clearly. As indicated by non-parametric correlations and the PCA, substitutability among factors is partial and significant pair-wise relationships are often non-linear,

suggesting that a renewed developmental vision should formulate strategies that are adapted to individual contexts and underlying conditions of growth, which are changing rapidly following recent socioeconomic challenges.

According to the mean value of the above variables that represents multiple aspects of socioeconomic development, world countries may be clustered into four categories with a specific profile. The first cluster includes wealthy (mostly European) countries that have medium-high economic performance accompanied by the highest scores in political and social development as expressed by the very low corruption, the highest political rights, civil liberties, human development and government effectiveness. In achieving this combination we can say that Europe is the region with the highest overall development in the world, with a balanced form of development with strong concern for society and the political system. In this sense, economic development is partly sacrificed in order to maintain and improve the functioning of social and political institutions. However, moderate heterogeneity was also observed in this cluster, possibly associated with a consolidating divide between western and northern European countries and southern (Mediterranean) countries (e.g. Carlucci et al. 2017). The second cluster represents the very rich countries of North America (USA), and the Middle East with the lowest corruption and high government effectiveness, but also with some problems with political development. The aforementioned countries seem to give priority to economic and social development but have a moderate gap in political development in respect of Europe, a fact that may reduce the overall development level.

A third cluster contains emerging countries with medium-low per-capita, relatively high perceived corruption levels and low political development and government effectiveness. The score for human development is not much less than the score for the aforementioned clusters. Political problems and a government with very low effectiveness in these countries seem to be serious handicaps to achieving a higher level of overall development, as described in the present study.

Finally, a fourth cluster containing more than 50% (actually 53.9%) of the countries examined in this analysis includes economically-deprived economies (with GNI equal to 22% of that of the emerging countries) and low scores for all indexes of social and political development. Low performance in all dimensions of development is typical of this cluster and is additional evidence that social, political and economic aspects of development are interrelated and no single one can be omitted from the developmental path. High values for these dimensions create "virtuous cycles" for development, while low values create "vicious cycles" of development.

Policy instruments suitable for increasing the level of overall development of countries require an integrated strategy for reducing corruption and stimulating

both human development and government effectiveness. However, in order to be effective, these strategies should be associated with the necessary democratic transformations. If the political system is considered "not free," a high overall level of development cannot be achieved and maintained, mainly because corruption cannot be effectively reduced in spite of the prevailing high income levels. The examples of Brunei, Kuwait and United Arab Emirates confirm this conclusion, with the astonishing exception of Singapore which, although considered a high income and partly free country, is one of the least corrupted countries in the world. This outcome could be attributed to cultural factors not examined in the present study. A high overall level of development is thus achieved and maintained in the long term only when socioeconomic development is associated with the consolidation of democracy. Increasing incomes is a necessary but not sufficient condition for increasing overall development.

CONCLUSIONS

The aim of this paper was to propose a classification of world countries according to relevant political, economic and social factors. While previous studies have empirically investigated the extent of corruption in various countries by analyzing differences in the respective values of the corruption perception index, the variables used in the present study are gross national income per head in purchasing power parities, the non-income human development index, the political rights index, and the civil liberties index. Based on the selected indicators, analysis of the socioeconomic context in the investigated countries provides some interesting results from a policy perspective by developing a comprehensive analysis of corruption corrected by socioeconomic factors (e.g. Tiihonen 2003). The research in this paper tested the hypothesis that developing countries have unbalanced socioeconomic contexts due to rapid economic growth with impact on corruption levels. Although affluent and socially-developed countries are relatively well distinguished from both emerging and economically-disadvantaged countries, these categories do not reflect the marked heterogeneity observed within countries. The lack of homogeneity within the groups should be attributed to institutional, territorial, political and cultural factors rather than to crude differences in the level of economic growth quantified by way of per capita income. This suggests that policies against corruption should target a complex, although balanced set of causes that are not only limited to the strictly economic performance of the country but range from the social sphere to political, cultural, institutional and environmental

attributes. Further studies that employ a hierarchical clustering of world countries according to the multivariate, diachronic attributes of socioeconomic development are thus necessary for understanding the gains and losses in economic performance and competitiveness across countries, and for clarifying the more subtle differences in the social and political systems of specific country clusters characterized by similar levels of income and economic productivity.

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REVIEW

GOVERNMENT FAVOURITISM IN EUROPE: ANTICORRUPTION REPORT 3 (THE ANTICORRUPTION REPORT) EDITED BY ALINA MUNGIU-PIPPIDI (OPLADEN, BARBARA BUDRICH PUBLISHERS, 2015)

Miklós Hajdu[1]

This volume contains papers that discuss the relationship between political corruption and organized crime using both quantitative and qualitative approaches. The related studies were carried out within the framework of the European-Commission-funded ANTICORRP project, a large-scale research project being conducted with the participation of research groups from fifteen European countries. However, the editor of this volume concentrated only on five Eastern European countries in addition to Germany and Turkey in the selection of the articles. What makes the book unique and unusual is that these papers present cross-national evaluations concerning corruption based on new objective indicators instead of the well-known subjective perception indices that are usually used for this purpose.

The analyses take into consideration the period between 2007 and 2013 and assess corruption risks in the construction sector based on two indicators. One of them deals with the practice of single bidding during calls for tenders, while the other is connected to the awarding of contracts to companies that have political connections. The existence (or co-existence) of such conditions may imply the presence of corruption; however, some more characteristics of public procurement can also be taken into consideration, such as the transparency of procurement procedures and the time that elapses between the announcement of tenders and the deadlines for application. The volume is edited by Alina Mungiu-Pippidi, a Romanian political scientist and professor of the Hertie School of Governance in Berlin.

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The volume's introductory paper is co-written by the book's editor and Roberto Martínez B. Kukutschka, a PhD candidate at the Hertie School of Governance, and draws attention to the anomalies among public procurements. The authors begin by citing the significant positive relationship between the amount of money in public procurement and corruption, as illustrated by scientific and anecdotal evidence. They pose the question how to continue making extensive public investment in developing countries without financing the rents for political clientele. What may highlight the importance of such a question is the fact that the official impact assessments of such investment projects undertaken by the authorities of the European Union often lack estimates of the effects of new money on corruption risk.

Mungiu-Pippidi and Kukutschka also raise the problem of defining corruption. Several terms related to corruption are discussed, such as particularism and state capture, which are exclusively associated with the corruption that accompanies public procurement. The authors describe a continuum from ethical universalism to particularism, with competitive particularism somewhere between; the main goal of their study is to locate the majority of government transactions of the analyzed countries on this scale.

The researchers have surveyed public procurement in the infrastructure sector in one highly developed old EU Member State (Germany), four new EU Member States (Hungary, Croatia, Romania and Bulgaria), one candidate country (Turkey), and a country neighboring (but outside) the EU (Ukraine). The authors are concerned about the transparency of public procurement even in the benchmark country, but in the case of the new member states they find spectacular evidence for particularism. They end their introductory article with several recommendations for reducing the resources for corruption and for increasing the constraints on corrupt behavior that might help purge public procurement procedures of corruption.

The article by Madalina Doroftei and Valentina Dimulescu – economic and political researchers at the Romanian Academic Society – presents a detailed picture of corruption risks in Romania. The authors offer statistical evidence for the existence of particularistic corruption: i.e., how tenders for public procurement have been won by companies that are favored by government. The authors examine a total of 6064 contracts, coming to the conclusion that both features that indicate particularism exist in the Romanian public procurement market, as about 40 percent of all agreements were thus affected. A conservative estimate presented in the article is that the yearly average value of kickbacks is 200 million euros. An interesting fact is that EU-funded contracts have much less risk of corruption than agreements involving only national funding. In addition, Doroftei and Dimulescu state their concern about the accessibility of

public-procurement-related data, often due to an absence of political will, not for financial reasons – some of their final recommendations also address this problem.

The volume continues with a discussion about the Bulgarian public procurement market by Ruslan Stefanov, Todor Yalamov and Stefan Karaboev, researchers at the Center for the Study of Democracy in Sofia, based on data from Tenders Electronic Daily. The authors find that both the number and the value of public procurement contracts dynamically increased during the time period under analysis; however, the proportion of procurements with single bidders decreased from 27 percent to 17 percent between 2009 and 2014. However, regarding the perspective of the winning companies, the authors come to the conclusion that the share of the top forty construction firms significantly increased after the economic crisis of 2008. Also, there are contradictory findings regarding the impact of EU funds. In terms of the number of bidders, it is argued that EU funding fosters competition. But, as the financial crisis begun and EU support replaced national funds, companies became more used to the circumstances of EU-funded contracts and devised ways to capture these funds. However, the authors conclude that EU-funded contracts still perform better regarding corruption risks than national ones.

Stefanov, Yalamov and Karaboev conclude that even if they cannot produce exact empirical evidence for favoritism, their results suggest that there are some companies that are successful with tendering because of their links to government, instead of their performance. The increase in EU funding has resulted in better control of public procurement, although this effect recedes as the size of tenders decreases. Some recommendations are formulated, mainly regarding changes in the administrative and legal framework that could lead to a more transparent system and effective action against the financing of the crony companies of the government via public procurement.

The Hungarian situation is assessed by Mihály Fazekas, Péter András Lukács and István János Tóth, participants of the ANTICORRP project on behalf of Corvinus University of Budapest. The authors rely on the data extracted from the Public Procurement Bulletin between 2005 and 2012 and their own data processing methods, while they gathered data about companies from the Amadeus database. Following the common framework for all the studies in the volume, the authors inquired into the prevalence of single bidding and found that the overall share of contracts awarded in such circumstances was 25 percent during the period under analysis, and reached a maximum of 35 percent in late 2010. Considering the fact that the construction sector is highly competitive, the authors find these results alarming. However, after new public procurement rules were introduced in

2011, the phenomenon of single bidding became much less common (15-20 percent), but the authors are still suspicious about how the market is concentrated in the hands of a group of companies.

On the other hand, the existence of companies with political connections was taken into consideration. The political relations of the winning firms were identified using very sophisticated methodology (the authors place great emphasis on this, but still indicate some doubt about whether they were able to identify all the linkages). In any case, results suggest that government connections have a strong influence on the likelihood of winning bids in construction markets, but in other areas of the public procurement market, such effects are not obvious. The authors conclude that these results are not surprising as they are in line with the findings of other experts. Also, they express recommendations regarding the need to limit and tailor public funding for the purpose of better controlling spending and improving the opportunities to reveal the political embeddedness of companies.

Munir Podumljak, President of Partnership for Social Development and Elizabeth Dávid-Barrett, a senior lecturer at the University of Sussex, write their paper about political favoritism in the Croatian public procurement. They begin by raising some concerns about the vulnerability of the Croatian contracting authorities to political influence, despite strong procurement-related regulations; the authors refer to the ideas of Mungiu-Pippidi that the existence of considerable opportunities and inadequate constraints create an environment suitable for particularism. Political influence over public procurement is approached from the perspective of the different kinds of contracting authorities that function according to diverse regulatory conditions. As the public procurements on the construction market are mainly connected to authorities that are subject to political control, and not with tightly regulated mechanisms of oversight, numerous opportunities arise for corruption, because: 1) the top managers of these authorities are appointed by political leaders, 2) the former organizations have only weakly controlled balance sheets, 3) formal controls are weaker for these institutions than for other types of authorities, and 4) regulatory authorities lack capacity. A case study about FIMI Media is included to illustrate how politics can influence public procurement, but exact statistics about crony winners are not available. Only the achievements of the most successful state-owned and private enterprises were analyzed.

Concerning the phenomenon of sole bidding, the authors present some statistical evidence, but the origin of the data is not clearly explained. Calculations based on data about 230 contracts from the Integrity Observers database indicate that 40 percent of all agreements concluded between 2012 and 2013 were finalized after a single bid was received – however, the table presented by the authors

suggests that this proportion is about 25 percent. Podumljak and Dávid-Barrett do not really explain the origin of their data, nor the conditions under which they obtained it.

The recommendations of the authors address the extensive political control over public procurement. Also, the transparency and the accountability of the Croatian public procurement system is the focus of several policy recommendations. The authors conclude that, despite the public procurement law and the fact that the institutional framework is adequate, a large share of public procurement occurs outside the control of these instruments.

Two professors from Hacettepe University, Ugur Emek and Muhittin Acar, summarize the situation in Turkey. The authors give a brief overview of the magnitude of public construction expenses and the legal framework of public procurement, focusing on the opportunities for the emergence of and the steps taken to eliminate corruption risks. However, their inquiry is based on a theoretical-legal approach and includes some highly aggregated statistics. No accurate figures are presented to reveal whether the phenomenon of single bidding exists in Turkey, and if so, to what extent. Regarding the potential linkages between public organizations and private enterprises, the topic of public-private partnerships is brought up, and the authors come to the conclusion that public procurement and PPPs may have become important sources for business development for some companies that have close relations with high-level representatives of the government. The policy recommendations of the authors relate to the problem of the lack of suitable, contract-level data for conducting a deeper analysis of the Turkish public procurement sector. This absence leads to deficiencies in transparency and accountability – the same issue which prevented the authors from engaging in more sophisticated and extensive statistical analyses.

Andrew Wilson, historian and political scientist at University College London, begins with a strong statement in his study about corruption risks in Ukraine: "Ukraine has always been one of the most corrupt post-Soviet states". The paper provides a general overview of the causes and effects of corruption in Ukraine, but does not follow the common framework and scope of the earlier studies in the volume. Wilson begins by assessing the outcomes of the "Euromaidan" protests of 2014 and concludes that the presence of corruption was one of the driving forces. He suggests that some positive changes have happened, as there is no single ideology or group that now guides reforms, and journalists and civil society have more opportunities to reveal corruption. Also, he mentions that the launch of the National Anti-Corruption Bureau at the end of 2015 with the support of the European Union was an optimistic event as its designers tried to avoid the numerous pitfalls that have befallen similar initiatives. Considering

procurement, Wilson highlights the decreasing trend to corruption. However, he also raises concerns regarding some of the legal and sectoral reforms that are lacking (mainly in the energy sector), the presence of oligarchs, particularly in the media, and the accessibility of public services. Finally, Wilson cites some findings from public opinion polls that suggest that understanding the reforms and the new societal willingness to make an effort to implement them are not sufficient.

The final study in the volume is written by Salvatore Sberna and Alberto Vannucci, political scientists at Scuola Normale Superiore, about a broader research effort within the ANTICORRP project that focuses on the interaction between corruption and organized crime in Bulgaria, Croatia, Hungary, Italy and Kosovo. The authors begin with a careful conceptualization of political corruption and organized crime, and also thoroughly discuss issues regarding the research methodology (a comparative cross-national study of a sensitive topic raises interesting challenges). Based on 29 in-depth case studies, Sberna and Vannucci define a number of recurring, general "red-flags" that may indicate anomalies in decision-making processes. Also, they present some interesting findings; for instance, that in the period under analysis most instances of corruption and organized crime were connected with the public procurement sector, and that national – non-EU – spheres of decision-making are less accessible to criminal organizations because of the lack of transparency with the management of EU funds at the country level.

The studies in this volume have been written by scholars, but seem to be more like policy reports than academic papers. However, adherence to the proposed common analytical structure becomes weaker in the papers presented in the second half of the volume (the data sources are insufficient in some countries under analysis). This actually helps to maintain interest, as the first articles are written to follow a rather repetitive framework. As the statistical analyses were based on different kinds of data sources and the quality of the data that was available differs significantly between countries, making a quantitative comparison is difficult. But, as several problems and similar phenomena were raised by all the papers in connection with government favoritism, the reader may get some insight into the country-specific details. In my opinion, an important overall conclusion of the volume is that the relationship between the presence of EU funds and the level of corruption risks is ambiguous in Eastern European countries, perhaps due to improper implementation. In summary, the volume is highly recommended to those who are especially interested in reading about new methods for analyzing corruption, and also for public procurement experts.

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GENDER INEQUALITY IN THE WORKPLACE (働き方の男女不平等 理論と実証分析) BY KAZUO YAMAGUCHI (TOKYO, NIKKEI PUBLISHING INC, 2017)

Iida Aki[1]

Although five years have passed since the Abe administration announced the intention of strengthening women's participation in the labour market as part of a national growth strategy, there has been no increase in Japan. Rather, the ranking of Japan in the Global Gender Gap reports has declined year by year: 101st out of 145 in 2015, 111th out of 144 in 2016, and 114th out of 144 in 2017 (World Economic Forum, 2015; 2016; 2017). The Act on Promotion of Women's Participation and Advancement in the Workplace came into force in 2016 April to strengthen the Abe administration's growth strategy in relation to the female workforce. According to this law, companies which have over 301 employees, as well as central and local governments, are required to draw up and publish a "Plan" for promoting women employees into managerial positions and providing a supporting environment, with targeted numbers: the aim is to have 30% of female managers by 2020 (Gender Equality Bureau Cabinet Office, 2016: 28). However, there is a big gap between the aims announced by the government and the actual situation in Japan – although only two years have passed since this law came into force, hence its effects cannot yet be seen.

According to the Japanese lifetime employment system, it is important how long one has been employed at a company: the term *Kinzoku* stands for the number of years one remains at one company as an employee: other specific terms include *Ippan-syoku* and *Sogo-syoku*; Ippan meaning "General" in English, and Sogo meaning "Integration/Comprehensive" (Syoku generally means "job"). The notion of Ippan-syoku was born after the Equal Employment Opportunity Law was enacted in 1985. Due to this law, companies could not discriminate in terms of the wages paid to male employees who were expected to become managers and those paid to female employees who were expected

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to take up supporting jobs. Sogo-syoku and Ippan-syoku were thus conceived to make it possible to maintain the system of wage differences as they existed before the law: those who are expected to become managers, typically men, are called Sogo-syoku (77.8% of those newly hired as Sogo-syoku in 2014 were men). At the beginning, Ippan-syoku was only applied to women. Although this women-only classification is now illegal, the legacy remains: more than 80% of Ippan-syoku newly hired in 2014 were female. A careful investigation of likely future changes in Japanese companies regarding gender inequality is thus a matter of great significance, and the book which is here reviewed will be valuable as early research. The text is particularly recommended for those who research gender imbalances and inequality in the labour market.

In the book, the author Kazuo Yamaguchi (the Hanna Holborn Gray Professor of Sociology at the University of Chicago) scientifically and empirically analyzes gender inequality in Japanese workplaces over eight chapters, mainly using statistical data. The purpose is to clearly quantify what kinds of inequality exist. Regarding the data used for the analysis in the book, a Japanese company survey in 2009 conducted by the independent administrative institution under the Ministry of Economy, Trade and Industry (a policy think-tank established in 2001, of which Yamaguchi is a visiting researcher) is used throughout.

First, in analyzing the gender gap among managers, Yamaguchi seeks empirical evidence that a conservative corporate culture is the source of gender inequalities and discrimination against women in Japan. According to the official statistics, the proportion of female managers in 2011 was 7.4% in companies with 500-1000 employees, and 5.8% in companies with over 1000 employees, while 45% of companies which had over 30 employees did not have any female managers. These numbers are extremely low compared to Western standards (Ministry of Health, Labor and Welfare, 2012).

Companies claim that this problem is due to the lack of Kinzoku years and experience of women, etc. However, Yamaguchi points out that companies do not mention the existence of discrimination against women that is in-built into their employment systems, including indirect discrimination, as a cause. Yamaguchi clarifies the existence of this discrimination through analyses. Specifically, the database previously mentioned contains 6480 males and 3023 females aged 23-59 who are engaged in 1677 companies. Yamaguchi measures the percentage of managers, including the position of subsection chief, by gender, along with the percentage of managers by gender using the five-year classifications of Kinzoku years, which start from the year of entry into the current workplace. Results indicate that in the first 25 years after employees join their company, the proportion of female managers, including subsection chiefs, is 10% or less, while in the sample of those who entered companies between 1980 to 1984 the

proportion is 14% (i.e. 26 to 30 years after the women joined the companies). However, men who only entered companies after 2005 reach proportions of more than 14% of all managers, including subsection chiefs. This means that such men spent less than five years working before reaching such positions, while those who entered companies between 1995 to 1999 (i.e. those who spent 11 - 15 years at the company) account for 20% of managers. It is thus clear that men achieve within five years of starting work what women need to spend over 26-30 years to achieve (and that men achieve in 11-15 years what women do throughout their entire careers). Namely, companies' excuses about women's short Kinzoku years, etc. are not valid. Accordingly, Yamaguchi has drawn up two hypotheses, in addition to assessing variables such as employees' academic background and age. The results of previous research by the authors focused on the responses given by employees in a large firm that showed that long working hours do not affect the rate of promotion of men, but do limit the opportunities of women. Based on this fact, Yamaguchi's hypothesis is that the difference in working hours affects the rate of promotion, that working hours are different for men and women, and that the relationship between the rate of promotion and long working hours was stronger for women than for men. Furthermore, based on the division of labour by gender that is still persistent in Japanese society, if age and other individual-level attributes are kept constant, those male employees who have children obtain higher managerial positions than those who have wives without children, while in the case of women the situation is reversed. Yamaguchi also supposes that differences in inter-company policies such as whether the company seeks to use the abilities of employees, regardless of sex, and whether companies seek to promote a decent work-life balance also affect the promotion of men and women.

Yamaguchi decomposes the gender gap between men and women into an "explainable" and an "unexplainable" part and analyses it further. The hypotheses are supported, except in the case that companies try to exploit the abilities of employees, regardless of sex (this affects the chance of promotion). However, even if women were equivalent to men in terms of human capital-related characteristics (age, educational background, employment experience, etc.) most of the gap between men and women could still not be explained: it was found that only 21% of gender inequality in the proportion of managers can be explained by referring to characteristic differences in human capital, and only 30% of gender inequality in the proportion of managers including position of section chief. Among the remaining gaps, working hours can be potentially be explained by wider cultural differences between men and women, which are more difficult to resolve. For example, there is still a significant gap in the amount of unpaid work in families between husbands and wives (90% of the

housework burden falls on the wife in the case of a regular employee couple). Men's participation at home in Japan is the least of any G7 country and much lower than OECD average (The Ministry of Health, Labour, and Welfare, 2008; OECD, 2014). In addition, Yamaguchi points out that even if the known gender differences between working hours and human capital are combined, this only explains about 40% of the difference in the gender gap in the proportion of managers, including subsection chiefs. Therefore, about 60% of the gender inequality found in companies in Japan cannot be explained or justified. In attempting to explain this remarkable difference, it is unreasonable to exclude the impact of Sogo-syoku and Ippan-syoku, which are unique elements of the employment system in Japan.

In the second part of the book, Yamaguchi focuses on the income gap between men and women and is able to explain about 80% of the difference. Results are in line with the previously presented tendencies. More than three-quarters of the difference is explained by five variables, including educational background, age, Kinzoku years, occupation and job-ranking. The fact that 80% of the income gap between men and women can be explained represents specific help for improving the situation and should be considered a great achievement. Moreover, the weight of the two variables occupation and job-ranking are significant, thus it can be said that the low rate of promotion of women (as previously shown) is the main factor in the income gap between men and women. It is important to know that if you are a woman and are occupied as a clerk (similar to Ippan-syoku), this is a career deadend and promotion cannot be expected regardless of Kinzoku years. However, Yamaguchi points out that the income gap between men and women is greater in terms of human-capital-related factors such as academic background, age, and Kinzoku years (instead of occupation and job-ranking) after employees reach managerial positions. If women have the same human capital as men, there is almost no income gap in the managerial positions, thus if women can attain promotion they have a chance of being equally treated.

Yamaguchi also finds that the existence of policies about the (gender-based) equality of opportunities at the company level play an important role in reducing the income gap; when such policies exist, they are found to increase women's income. However, companies in which only a work-life balance policy exists actually have a larger income gap, suggesting that specific instruments that promote gender equality of opportunities are required. This may be why companies that do not have a policy that supports the gender equality of opportunities employ a lot of female employees with low wages through their work-life balance policies; they promote a so-called "Mommy track." As work-life-balance policies are accompanied by such risks, diversity management is indispensable for narrowing the income gap between men and women.

Additionally, Yamaguchi finds that GDP per hour and the degree of gender equality (using a Gender Empowerment Measure) are positively correlated in OECD countries, and there is also a strong correlation between gender equality and hourly labour productivity. The analysis of Japanese companies suggests that if the proportion of female managers increases while the proportion of women's regular full-time employees remains constant, the productivity and competitiveness of companies will increase. However, if the number of regular full-time female employees increases while the proportion of female managers remains constant, productivity and the competitiveness of companies will decrease. Furthermore, when there are many male employees with a university degree, the productivity and competitiveness of companies is increased, while female university degree holders do not have this influence; however, as far as companies with a policy that promotes the gender equality of opportunities are concerned, an increase in university graduates increases productivity and competitiveness. From this fact it is suggested that Japanese companies do not exploit the abilities of women university graduates. Based on these findings, Yamaguchi supposes that discrimination against women creates different incentives for male and female self-investment. As a consequence, indirect discrimination against women lessens the incentive for men and women to self-invest, although in jobs where it is difficult to get a job even after self-investment, the gender gap in relation to positions becomes larger. Moreover, in the opposite case it was found that the degree of achievement in terms of the position of females may exceed that of males in some cases. This finding is consistent with the idea that the existence of a policy that promotes the gender equality of opportunities affects women's success.

Throughout the book, Yamaguchi explains Japan's unique employment system and clarifies its differences with the systems of the West. He also explains what the defects and weaknesses of the formulae and data he uses are in detail before and each analysis. The theme of each chapter is understandable and clear, and logically summarizes the purpose, hypotheses, theoretical framework and methods therein. By undertaking all analyses using concrete data, the author succeeds in eliminating any grounds for criticism on the basis of subjectivity. However, the addition of some qualitative research (such as interviews and case studies about the psychological status of women in workplaces) may have more strongly verified the claim that company policy is able to promote the activity of women and affect women's motivation to pursue Kinzoku, thereby further supporting the findings of the book. If the proposed studies can be conducted, Yamaguchi's claim that the biggest corrective of gender inequality in the labour market would not be to decrease the income gap between men and women but to narrow the labour productivity gap between men and women could be strengthened.

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HASÍTOTT FA, BY JÓZSEF BÖRÖCZ (BUDAPEST, LIBRI, 2017)

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József Böröcz, acknowledged scholar of world-systems analysis, was born in Budapest in 1956. He studied literature, linguistic and cultural theory, as well as Polish at Kossuth Lajos University of Sciences in Debrecen between 1976 and 1982. After a year of working as a freelance translator from English, he left for the USA where he embarked on a Ph.D. which he finished in 1992 (Johns Hopkins University). He joined Rutgers University in 1995, where he is currently a professor of sociology. In 2004, he earned his Dr.Sc. degree in sociology at the Hungarian Academy of Sciences.

Hasított fa (Split firewood)[2] is a collection of his publications either published in, or translated to Hungarian. The volume is made up of three parts, organized along three major themes: global dependency relations, the semi-periphery, and Europe and its coloniality. Its core claim is that there is a system of dependencies that connects economic actors. This does not necessarily mean a zero-sum game, but – to put it plainly –, if there is a gain, there also tends to be a loss. An important contribution of the volume is how it re-defines global actors, with the emphasis on relations, and it is precisely these descriptions that reveal the novelty of the analysis.

Regarding the European Union, Böröcz's approach makes it possible to go beyond culturalism (that is, overemphasizing the symbolic and the cultural).

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2 The title refers to the lines of Attila József's poem "Consciousness":
"Just like split firewood stacked together,
the universe embraces all,
so that each object holds the other
confined by pressures mutual,
all things ordained, reciprocal.
Only unbeing can branch and feather,
only becoming blooms at all;
what is must break, or fade, or wither."(translated by Zsuzsanna Ozsváth)

Western European states followed and then extended their interests when establishing political and economic affiliations with Eastern Europe: the internal logic of the EU is based on facilitating specific flows of capital: on returning the economic capital to the core, and the valorization of cheap Eastern European labour.

State socialism (and the system change) can also be considered in terms of such dependency relations, or actually a multitude of them: internal (both political and economic) dependency from the center (Moscow), and fiscal dependency on economic core countries. Following the logic of Böröcz, these two dependencies are related to each other and an analytical framework is needed for their mapping and description.

Both for the world economy and for Europe, socialism was first and foremost an alternative to capitalism – a new system of property relations and market-state relations. Similarly to the rejection of culturalism as the foundational principle of the EU, instead of referring to socialism as an emancipatory project based on an egalitarian ideology and taking its successes as the result of the application of such ideology, Böröcz studies state socialism from an external perspective; namely, by examining how the former communist countries relate to capitalist countries and, on a broader level, to global political and economic relations. Böröcz shows how the opposition of socialism (as an emancipatory ideology based on collectivism) to capitalism (an emancipatory ideology based on individualism) represents a false dichotomy. Instead of primarily ideological regimes, geopolitical interests shape the relation of dependencies.

Through revealing how relations shape actors, these actors are then described as *doing* certain things instead of being plainly *constituted* through the expression of certain truths or values (as if a political entity were a passive reflection of culture; so-called "shared European values" in this case). Following this perspective, the question becomes how certain rearrangements of a given scale (for example, the Eastern European system change) are connected to larger-scale global transformations. Following the logic of Böröcz, such an analysis has to take external dependencies into account (see the first part of the book), instead of focusing solely on the structures (relations, processes) within a given society – because these are influenced by external dependencies (see the second and third part of the book).

One way of moving beyond the conventional East-West dichotomy would be to see how the relations of external dependency extend further than either Western Europe or the Soviet Union. Another way to supersede this dichotomy is to see how neoliberal ideology in general relates to the post-state-socialist countries, and how the annexation of these countries gave both an economic boost and moral-political legitimacy to the neoliberal world order. Böröcz proposes that

instead of "system change" it is more accurate to talk of a sort of "dependency change" – after the demise of the Soviet Union semi-periphery countries became dependent on economic core countries. "System change" implies a modernist teleology in which "progress" takes a straightforward direction, leading towards the Western model of representational democracy and market capitalism. A change of dependencies is more of a technical term: instead of inferring who stands on which side of history (either good or bad), it is a means of inquiring to whom a country gives up its sovereignty, or what alliances have to be made. Instead of the idealized "Enlightened West" there remains something much more sobering – an economic core extending its reach and, last but not least, a corrupt and empirically negated theory of the legitimization of an unfair share of resources that favors a relatively small part of the continent. The concepts of "Western Europe" or "European values" are thus examples of how cultural patterns, topoi or certain figurations are invoked to legitimize such uneven relations, the extraction of resources, or unequal exchange. With the figure of the synecdoche (Chapter 16) applied to Europe (the part representing the whole, the EU standing in for the whole of Europe) Böröcz describes how this "Europe" might self-reference as an inherently cultural project, and it is precisely this discourse (reflecting symbolic values) that enables the extraction of material value. Through the privileging of "European values" the interest of economic core countries may be portrayed as universally human. Some informal economic relations (for example, Hungarian shopping tourism in Austria) are not even provided with a narrative form – or such narrative forms are not part of the popular cultural imaginary – as these would not fit into popular conceptions about "poor neighbors;" this is too far outside the hegemonic framework.

A similar example described by Böröcz is how colonial rule is legitimized through describing colonial populations as inherently primitive, childish, and even feminine (p.338) , similarly to the stereotype about women being inherently caring and nurturing. Such a perspective is prevalent and deeply entrenched, and is also based on ideas about inherent qualitative differences.

This volume reveals connections between the economic and the symbolic-discursive, yet it never provides a clear definition of the overall framework and its concepts (each essay uses different concepts). No overall methodology is described. Böröcz describes linguistic phenomena or semantic shifts, yet arrives at much broader, much more complex social phenomena with multiple registers. One example is how "social closure" (groups monopolizing resources) at the time of the transition from feudalism from capitalism is demonstrated to work based on two different assumptions about the history of social change: either the return of "human capital" is based on abilities and merit, or the process involves a much more complex legal-social process – both involve a

complex set of interactions. Böröcz provides an example from Marx and Engels ("Manifesto of the Communist Party," 1848) – namely, how the bourgeoisie "has put an end to feudal, patriarchal, idyllic relations.... It has drowned the most heavenly ecstasies of religious fervour, of chivalrous enthusiasm, of philistine sentimentalism, in the icy water of egotistical calculation" – to describe a complete regime of social and personal interactions.

It is worth making a comparison here with Frantz Fanon's (1967) description of the experience of a black man who returns from France. Fanon's description is first expressed in "genetic terms" ("his phenotype undergoes a definitive, an absolute mutation"), and then the gait is described, "forces are set in motion." A simple greeting is described as a complex set of changes and interactions: Frenchness bows the body instead of a broad sweep of the arm, words are spoken with a dialect carried through the "habitually raucous" contrast of the voice following a slight bow. This description of the French-creole subject is a whole embodied framework that describes and maps subjectivity, where discourse is only one element. Such a description of coloniality and its effects is about being human (human subjectivity, experience) thus it presumes new ontologies of the human subject beyond the hegemonic Western modality.The coloniality of being is a similar concept, raising the challenge of connecting genetic, existential, and historical dimensions.This is the legacy of colonization, but also a separate entity itself because it is present in social norms, desires, and as a collective identity.

The basic Marxist concept of the superstructure is present in the above-mentioned scholarship, but culture is a set of effects of subjectification, not just ideology. Böröcz describes ideological structures which have effects (both cognitive and corporeal), but there is no clear mapping of these. Social phenomena are sometimes described as detailed, complex entanglements containing layers of social interaction and their effects, yet there is only treatment of discourse and language, as if language principally structured culture and its subjectification effects, but this privileging of language is not explicitly acknowledged. One example involves Joschka Fischer, who "has a cognitive pose" when invoking "Europe" as a panacea for all the ailments of the world. Fischer is a political actor making a public statement. But based on this text, how could we know about his cognition, or anyone else's? The description reveals what effect his reference to Europe achieves in the context of a given political situation, not what his personal desires and beliefs could be.

Böröcz describes how topoi (for example, a "Europe" already imbued with meaning) are instrumentalized, but they often emerge from top-down processes. One fact which Böröcz does not address directly is that within EU culture is located a site for both managing and producing difference;

there is a complex legal-institutional network dedicated to this task. Whether given meanings remain and spread and how this is connected to political and economic interests is also a much more complex process, but in this volume only the macro perspective is explored. Seemingly, the subjects located below some collective entity (Hungarians, Austrians, and so on) are only passive replicators of discourse and they do not have much agency beyond that, but this is not stated explicitly, although such a conception of subjecthood corresponds to the determinism of world-systems theory and its focus on the macro level. World-systems theory describes how constraints on any possible action are manifold – see, for example, Chapter 6 about global redistribution (Redistributing Global Inequality: A Thought Experiment). Redistributing "oligarchic wealth" and thus balancing the structure of global inequality might even make sense from a purely fiscal perspective – rich countries would not suffer substantial losses; poor countries would be way better off. If this is the course of action to be taken, the question is how the passive subjects of the volume would enact such a change, and who the subjects really are.

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