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The increasing importance of friends: Changes in core discussion network composition in post-communist Hungary between 1997 – 2015

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ABSTRACT

In order to detect changes in social connectivity, we examined evolutions in the personal network structure by analyzing over-time trends in the composition of the population's core discussion networks on four cross-sectional, nationally representative surveys between 1997 and 2015, in the era of post-communism, in Hungary. There has been a very significant change; in fact, a reversal of trends regarding the composition of the core discussion networks (CDNs) concerning kin and non-kin ties over the past decades. Our data suggest that friendship ties gained more importance. There seems to be a generation-specific aspect of the change: young people include family ties less often than older people and this effect strengthens over time. Women still have a higher ratio of kin ties compared to men and this effect does not change significantly during the analyzed period.

Introduction

Social changes can be expected to influence seemingly private decisions of people, and thus affect individuals' personal network structures. A number of studies have focused on the extent and nature of changes in social connectivity (e.g., Mollenhorst et al., 2014; Fischer, 2011; Ishiguro, 2018; McPherson et al., 2006), but only a few concentrated on post-communist countries (Sik, 1994; Sik and Wellman, 1999; Völker and Flap, 2001; Kmetty et al., 2017), especially in recent years. As core discussion networks, a widely studied yet specific segment of interpersonal networks consist of mainly strong ties, social changes affecting nuclear families and close friendships can be expected to have the most impact on them (Dávid et al., 2016).

There are several social changes most developed societies have experienced, and there are those that are specific to the post-communist bloc. After the transition to a democratic market economy both social processes had had their impacts in Eastern European countries: traditional values inherited from the communist times on the one hand and modernization, including educational expansion, residential mobility, changing family values and/or individualism on the other.

The aim of our study is to examine the population-level temporal changes in core discussion networks between 1997 and 2015 in Hungary, a former communist country. We expect that with our unique dataset consisting of four cross-sectional, nationally representative surveys, we can detect changes in social connectivity focusing on core discussion network composition and its variability in different social groups. The results of our analysis will contribute to the discourse to understand how different social phenomena (namely modernization and post-communism) may or may not interact.

Core discussion networks

The core discussion name generator tries to identify the most intimate relationships of the respondents and to delineate the most intimate circles of the ego (Marsden, 1987). Core ties tend to be high in trust and shared norms; they are highly homophilic in terms of attitudes and behaviors and provide broad social support (McPherson et al., 2001). The core discussion network (CDN) has been one of the most frequently studied segments of ego-centric interpersonal networks during recent years; and the name generator deployed to elicit the CDN has been extensively used internationally, e.g., in the United States (Marsden, 1987; McPherson et al., 2006; Hampton and Ling, 2013), the United Kingdom (Bennett et al., 2000), China (Ruan, 1998), Russia, France, Poland, Spain, Bulgaria, and Hungary (Gibson, 2001), the Netherlands[1]

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[1] In the Netherlands the precise wording was "important personal matters".

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(Mollenhorst et al., 2008a, 2008b, 2014), Japan[2] (Boase and Ikeda, 2012) the US, Norway, and Ukraine (Hampton and Ling, 2013), East Germany (Völker and Flap, 2001), and Germany (Wöhler and Hinz, 2007). These studies are based on nationally representative samples where the core network size ranged, on average, from a little less than two to about four alters (See Table A1 in the Appendix). In these studies, it is well supported that various characteristics of core networks of a population differ by a number of socio-demographic characteristics and are influenced by the social context as well.

As CDNs are considered to consist of strong, intimate ties of the ego, they could be expected to be dominantly stable over time. However, recent research results have proved the opposite: core discussion networks are not as stable as we might expect theoretically; they are quite context-dependent, reflecting both social changes (e.g., McPherson et al., 2006; Ishiguro, 2018) and also change over a life course, e.g., when the ego enters new contexts (school, work, retirement, prison, widowhood etc.) (Small et al., 2015; Cornwell et al., 2008; McDonald and Mair, 2010; Mollenhorst et al., 2014; Völker et al., 2016; Schwartz and Litwin, 2018).

Interpersonal networks after the political transition in Hungary in an international comparison

After the transition from a communist economy to a democratic market economy in 1989, social and economic changes also affected interpersonal relationships. In Hungary, the post-communist period after the transition should be further divided: the first, dramatic phase of the transition period, the years of the so-called deep transformational recession (Kornai, 1994) of the 1990s were characterized by a decreasing role of the workplace and a growth of kin contacts; thus non-kin ties were among the biggest losers in the change of regime (Angelusz and Tardos, 2001; Albert and Dávid, 1999). Angelusz and Tardos (1998), partially repeating their survey in the 80 s a decade later, concluded that the role of employment and income status, the material aspects of maintaining a relationship, and political affiliations status in shaping interpersonal networks increased. After the great shock in the 1990s, when the transition to a democratic market economy was completed and government-run institutions were dismantled and privatized, the rate of economic and social transformation slowed down, and a gradual consolidation could be witnessed together with an economic upturn, with the increase of general living standards. However, these macroeconomic improvements began only after 1997 (Havasi, 2002).

Cross-country comparisons of interpersonal networks after the transition show similar tendencies as studies from the 1980′s: the dominance of family ties, more limited friendship networks and a significant share of the adult population without any friends (Höllinger and Haller, 1990; Bruckner and Knaup, 1993). About the pre-1997 period, Kmetty et al. (2017) conclude that the size of the networks measured by three name-generators (which is wider than the core-discussion network) continuously decreased since the mid-1980s., after the 90 s, the significant decrease of friendship ties seemed to have stopped by the end of the century (Albert and Dávid, 2018).

Based on data from the Social Networks Module of the 2001 ISSP, the number of close friends in Hungary was 4.71, ranking last but one among the 22 participating countries, overtaking only Latvia. Just for comparison, people in the top-ranking country, Norway, reported to have 15.65 close friends on average, in Slovenia 14.76, in the USA 12.6, in Austria 10.02, and in Poland 8.75 (Drobnič and Techen, 2013). The ratio of those claiming to have no friends at all was the highest in Hungary in 2001 (25 % versus fewer than 10 % in all the other countries). In Hungary, a significantly higher proportion of women had no friends, but the difference, when compared to men, seemed to be diminishing (Utasi et al., 2006).

Based on results from the ISSP survey in 2006, Hungary could be characterized by micro-social isolation and the limited size of interpersonal networks. In 2006, 41 % of respondents contacted 0–4 persons on a weekday,[3] including household members. This ratio was 12 % in France, 13.5 % in England and 18 % in Germany, and was somewhat higher in other post-communist countries (18 % in the Czech Republic, 25 % in Slovenia, 29 % in Latvia, 32 % in Poland). With age, social isolation increases so significantly that three-quarters of those older than 65 years have no one to turn to with their problems (ISSP Research Group, 2008; Dávid et al., 2016).

Research questions and hypotheses

The effects of different social processes on the composition of the CDN

Our research question is related to the changes in the composition of core discussion networks, namely the ratio of kin and non-kin ties over time in the period between 1997 and 2015. The end of communism (1989), the transition to a market economy and a free, democratic political system may have enhanced trends in social networks described as being connected to modernization, such as the dissolution of traditional personal relationships like family bonds and kinship ties, and traditional ties being replaced by more voluntary forms of personal relationships, such as friendships (Bruckner and Knaup, 1993). In more traditional societies, there is a greater emphasis on family and kinship. Yu and Chiu (2014) found substantial gender and cross-country differences: in the US, both for women and men, CDNs are larger. In Taiwan, CDNs consist of few non-kin ties. In the US, the proportion of non-kin ties is 49.6 % for men and 47.2 % for women, while in Taiwan, it is less than one-third, or 33.2 % for men and 28.2 % for women. According to the authors, the reason for this lies in the greater emphasis on family and kinship in Confucianism and traditional Chinese culture than in Western societies, in which individualism is more prevalent. As people's lives come to be less constrained by tradition and custom and more subject to individual choice, traditional ties may lose their impact and communities of fate become replaced by communities of choice (Giddens, 1990, 1992; Beck, 1992; Beck and Beck-Gernsheim, 1995; Wellman, 1979; Pahl and Spencer, 2004).

New information technologies, which have been emerging in the era, may help to maintain both kin and non-kin ties but can be explicitly linked to an increase in friendship (non-kin) ties, at least in the US (Wang and Wellman, 2010). There has also been significant educational expansion in recent decades. Due to these tendencies, the share of those in the 18+ age bracket, who had completed at least secondary schooling, grew from 23.6 per cent in 1980 to 42.6 per cent in 2005, while the proportion of those completing tertiary education went up from 6.5 per cent in 1980 to 14.7 per cent in 2005 (Fábián et al., 2014). The longer time spent at schools may result in more friends in the networks.

Free democratic political climate is also expected to increase friendship ties. When an authoritarian regime in which social interactions are constrained and mostly limited to kin ties is replaced by democracy, non-familial, civil and community relations are likely to be established (Dávid et al., 2016). However, political polarization may disrupt friendship networks (Angelusz and Tardos, 2006; Kmetty, 2014).

Demographic trends, such as the decrease of the size and the stability

[2] Ishiguro (2018) analyses Japanese core networks over time but used a different name generator: respondents were asked the number of alters with whom they felt they were intimate and could count on in their daily lives.

[3] In ISSP 2006 – Role of Government questionnaire the precise wording was: On average, about how many people do you have contact with in a typical week day, including people you live with. We are interested in contact on a one-to-one basis, including everyone with whom you chat, talk, or discuss matters. This can be face-to-face, by telephone, by mail, or the internet. Please include only people you know.

of families are expected to affect confidant networks in which close family members play an important role. The ratio of married people decreased by 46 % between 1990 and 2010; the average household size decreased; the average age of starting a family increased significantly. In 1990, 20 % of women and 26 % of men were at least 30 years old when getting married for the first time; in 2013, 54 % and 70 %, respectively (Murinkó and Spéder, 2015:9). The maternal age when the first child is born rose rapidly (the age of mothers at the birth of their first child increased from around 23 years in 1990 to over 28 in 2010), the divorce rate peaked in 2008 with 0.46. The prevalence of patchwork families and other living arrangements increased, and 52 % of children were born out of wedlock in 2014 (Kapitány and Spéder, 2015). We may expect that these changes weaken not only the stability of families but decrease the available pool of supportive family ties. As several tendencies suggest the increase of friendship ties and the decrease of family ties in core discussion networks, we can formulate our first hypothesis (H1), where we expect the increase of the ratio of non-kin ties in the CDN over time.

The changing structure of CDNs among different social groups

There are several socioeconomic characteristics that, at a given period, have a significant influence on the characteristics of ego-centric networks. Such variables are limited in our available datasets; however, based on the literature, we might reasonably consider that gender and age have a measurable influence on core networks. Women are traditionally considered to be more active in maintaining kin ties but in the past discussing problems is less of a friendship criterion for men than for women (Bruckner and Knaup, 1993). However, based on scarce, mostly qualitative evidence on the homogenization of the definition of friendship, male friendships increasingly include the provision of emotional support, including sharing one's problems (Menaker, 1986; Pahl, 2000).

Based on these findings, we hypothesize that in the earlier years of the examined period women have a higher ratio of kin ties (H2a), and this difference becomes bigger over time with the increasing ratio of friendship ties (and thus decreasing ratio of kin ties) in men core networks (H2b).

Previous studies indicated that younger people have more friends in their network, while aging makes the network of people more kin-dominated (Abuladze and Sakkeus, 2013; Albert and Dávid, 2018). Furthermore, there is an age difference in the extent of Internet and social networking sites usage – so the above-mentioned ICT revolution hasn't affected the different age groups the same way. Younger people are more likely to use these tools, and according to a number of studies, usage of the Internet and social media networking sites have a positive impact on the maintenance and formation of friendships (Wang and Wellman, 2010). The educational expansion also only affected the younger generation. Therefore, as a third hypothesis we assume that the ratio of non-kin confidants in the CDN is larger among younger than among older people even in the early years of the examined period (H3a), and that this effect becomes stronger over time (H3b).

Previously mentioned literature suggested that women have a higher ratio of kin ties than men and that older people have a higher ratio of kin ties than younger ones. Harling et al. (2020) found that in South Africa, the number of kin ties decreases with age among women because of the larger proportion of widowhood among women compared to men. Similarly, in Hungary, the life expectancy for women is also higher than that of men, and middle-aged men have been particularly affected by excess cardiovascular morbidity, the so-called Central-Eastern European health paradox (Kopp and Réthelyi, 2004), so we can assume similar tendencies to be observed. Thus, we hypothesize that the cross-effect of gender and age is significant to the composition of the CDNs: the effect of gender is significant on the ratio of kin ties among younger people (with women having more kin ties than men) and it becomes significantly weaker in the group of older people – as the ratio of kin ties equalize between the two genders, with women losing kin ties more than men (H4).

Data and methods

Data collection

We used four Hungarian cross-sectional, nationally representative surveys from different time points to analyze the core discussion networks of the adult Hungarian population (18 years or older). The four snapshots were taken in 1997, 2004, 2011, and 2015. As our data is not from a panel survey where individual-level changes can be detected, we have to emphasize that the trends and changes we can detect, are at a national level.

The first of our data sources was a face-to-face survey conducted in 1997–98 by the HAS-ELTE Research Group of Communication Studies. The sample size was 1,790. We also analyzed a Household Monitor Survey carried out in 2011 (n = 1018), and two surveys financed by the Hungarian National Research Fund (OTKA) in 2004 (n = 1011) and 2015 (n = 2687), all collected by TÁRKI Social Research Center Inc.[4] All the surveys were taken with probability sampling, and post-stratification weights were used in order to handle the minor differences between the sample and the population. The answers were collected via face-to-face interviews.

Measures

In each survey, the same measurement tool, the "important matters" (or GSS) personal network name generator, was used: "Most people sometimes discuss important matters with others. If you consider the past six months, who are the people with whom you discussed the most important things, your problems, sorrows, complaints?".[5] Questions were asked about the relationship between the respondent and each of the alters mentioned. The ratio of kin ties was measured by the ratio of the number of mentioned alters, who are kin of the respondent divided by the number of all alters mentioned for the question.

Gender was measured as a binary variable (0 – woman, 1 – man). Age was calculated by substracting the respondent's year of birth from the year of the data collection. We tested our hypotheses with multidimensional linear regression models with interaction terms, where we used several other characteristics of the respondent as control variables.[6]

The control variables were the following. Education is measured in a categorical form, from elementary school only to university diploma. The type of settlement is also categorical, from village to capital city. We use a binary employment status variable (0-did not work, 1-worked). The size of the household is measured at a continuous level with the number of people living in the same household as the respondent (including themselves). Relationship status is binary with 0 if the respondent did not have a partner and 1 if they had. Region of the domicile was measured in the following categories: Central-Hungary, Eastern-Hungary, Central- and Western Transdanubia, and South Transdanubia.

[4] 3 out of the 4 surveys were carried out by the same company, and all applied the same methodology.

[5] This is internationally the most common tool used to measure core networks, mostly because it is relatively inexpensive and practical in questionnaires (Burt, 1984; McCallister and Fischer, 1978; for a critical review see Marin and Hampton, 2007). After the respondent listed the maximum of 5 names, further questions were asked about the mentioned alters (sex, age, educational level, relationship with the ego). Thus, the composition of the CDN can also be studied. However, no data were collected regarding the existence of ties between the alters mentioned, so there is no information of the inner structure of CDNs, e.g. their density.

[6] The potential pool of control variables were limited by the availability of variables included in all the datasets we worked with.

Table 1
Descriptive statistics of the main variables by year of survey.

Year of survey	N	Mean number of ties in CDN	Mean number of kin ties in the CDN	Mean number of non-kin ties in the CDN	Mean ratio of kin ties in the CDN
1997	1790	2.30	1.96	0.34	0.87
2004	1018	2.21	1.66	0.55	0.79
2011	1011	2.30	1.26	1.04	0.60
2015	2687	2.19	0.93	1.26	0.43

The years of survey were included in these multidimensional models as dummy variables, with the reference category of the earliest year, 1997, as with this technique, we can observe nonlinear changes in time.

Basic characteristics of the data

For the thorough understanding of the temporal changes, we first show the descriptive statistics of the core discussion networks in different dimensions, and then we turn to multidimensional models. In Table 1, we can see that the average number of kin ties decreased between 1997 and 2015 from 1.96 in 1997 to half (a mere 0.93 by 2015). We can see a reverse tendency in the average number of non-kin ties: it increased in the examined period from 0.34 to four times as many, (1.26) in 2015 – the first time the mean number of non-kin confidants significantly exceeded that of kin ties. Accordingly, the composition of the CDN changed over time: the mean ratio of kin ties in the CDN constantly decreased from 87 percent in 1997 to 43 percent in 2015.

Results

We tested our hypotheses with multidimensional models detailed above. With these multidimensional linear regression models, we were able to control for some possible confounding factors, and thus get more valid results. Our dependent variable was the ratio of kin ties.[7] Based on the theoretical considerations and the available control variables, the baseline model included gender and age as independent variables, and education, region, type of settlement, size of household, the relationship status of the respondent, the employment status of the respondent and region as control variables. To be able to observe changes over time, survey dates (years) were also included in the analysis in dummy form (to detect possible non-linear changes in time). Additionally, to specifically test H2 and H3, we included interaction terms to the analysis: the interaction of gender and year of the survey, and age and year of the survey.

All of the models were significant, with the adjusted R-square between 27.7 % and 28.3 % (for detailed results, see Table 2). In the baseline model (Model 1), the ratio of kin ties gets smaller and smaller over time in the core network of the people, so we can accept H1. The effect of the independent variables on the ratio of kin ties was as follows. Men have a smaller ratio of kin ties in their CDN than women. Those who are older have a larger ratio of kin ties in their core network. Regarding the effect of control variables, we can see the following: those who live in Central Hungary have larger, and those who live in Central- and Western Transdanubia have a smaller ratio of kin ties compared to Eastern Hungary. Those who live in the region of South Transdanubia are not significantly different from those who live in Eastern Hungary from the perspective of the ratio of kin ties in their CDN. More educated people, those, who live in a larger settlement, who don't have a partner and those who work, have a smaller kin ratio in their CDNs.

With the help of analyzing the interaction terms, we can examine how gender and age affected the size of the CDNs in the different years. We did not find significant interactions for the cross-effect of gender and the year of survey. Taking into account that the main effect of gender showed that women have a higher ratio of kin ties compared to men; and that this effect does not change significantly over time, we can accept H2a but reject H2b as the effect of gender does not increase over time.

However, we found significant effects for the interactions of age and the year of the survey. Based on the interaction coefficient in Model 3, it seems that age has become more and more important over time. While in 1997, one could observe that age did not affect the ratio of kin ties, in

Table 2
OLS regression models on the ratio of kin ties in the CDN (among those with at least one confidant).

	(Model 1)	(Model 2)	(Model 3)	(Model 4)
Constant	0.673	0.672	0.815	0.665
Variables				
Gender (men)	−0.03***	−0.032	−0.036***	−.0022
	(0.009)	(0.017)	(0.009)	(0.026)
2004 (vs.1997)	−0.079***	−0.087***	−0.199***	−0.080
	(0.014)	(0.019)	(0.040)	(0.014)
2011 (vs.1997)	−0.242***	−0.234***	−0.408***	−0.242
	(0.014)	(0.020)	(0.040)	(0.014)
2015 (vs.1997)	−0.411***	−0.404***	−0.635***	−0.411
	(0.011)	(0.015)	(0.031)	(0.011)
Central-Hungary (vs. Eastern-Hungary)	0.039**	0.039**	0.038**	0.039
	(0.012)	(0.012)	(0.012)	(0.012)
Central- and Western Transdanubia (vs. Eastern-Hungary)	−0.029*	−0.029*	−0.028*	−0.029
	(0.012)	(0.012)	(0.012)	(0.012)
South Transdanubia (vs. Eastern-Hungary)	0.012	0.012	0.012 (.016)	0.012
	(0.016)	(0.016)		(.016)
Education	−0.014**	−0.015**	−0.016**	−0.014
	(0.005)	(0.005)	(.005)	(0.005)
Type of settlement	−0.019***	−0.019***	−0.018***	−0.019
	(0.005)	(0.005)	(0.005)	(0.005)
If R has a job (yes)	−0.058***	−0.058***	−0.061***	−0.059
	(0.010)	(0.010)	(0.010)	(0.010)
Size of household	0.023***	0.023***	0.022***	0.023
	(0.004)	(0.004)	(0.004)	(0.004)
If R has a partner (yes)	0.131***	0.131***	0.133***	0.132
	(0.010)	(0.010)	(0.010)	(0.010)
Age	0.003***	0.003***	0.000	0.003
	(0.000)	(0.000)	(0.001)	(0.000)
Interactions				
Gender x 2004		0.016		
		(0.028)		
Gender x 2011		−0.017		
		(0.028)		
Gender x 2015		−0.015		
		(0.022)		
Age x 2004			0.003**	
			(0.001)	
Age x 2011			0.004***	
			(0.001)	
Age x 2015			0.005***	
			(0.001)	
Gender x Age				0.000
				(0.001)
F-value	182.598***	148.436***	153.603***	169.570***
Adjusted R^2	0.277	0.277	0.283	0.277
N	6182	6182	6182	6182

OLS regressions.
Unstandardized regression coefficients (standard errors in parentheses) ***: p<0.001.,**:p<0.01., *:p<0.05.

[7] As the ratio of non-kin ties is the counterpart of the ratio of kin ties, the regression coefficients of the non-kin ties models are the same value and opposite direction of the model of the kin ties. Thus, we present only the model of the ratio of kin ties, since the other model would not give any additional information.

later years, the effect of age becomes significant compared to the reference year. Nonetheless, these differences are not significant between each year: it is important to mention that there is no significant difference between the years 2004, 2011, and 2015 – they are only significantly different compared to 1997. Based on the main effect of age (younger people have a larger ratio of non-kin ties compared to older ones) and that the interaction term showed the increase of the effect after 1997, we can accept both H3a and H3b.

We do not find a significant interaction between gender and age on the composition of the network in Model 4; thus, we have to reject H4: there is no significant cross-effect between gender and age on the ratio of kin ties.

Discussion

We aimed to describe the changes in the composition of core discussion networks in Hungary over two decades, starting in 1997, almost 10 years after the change of regime, when the Hungarian society started to recover from its dramatic social and economic consequences. In our data, a significant change has been revealed regarding the inner composition of the CDNs with respect to kin and non-kin ties between 1997 and 2015. As in Western societies, core discussion networks have become less family-oriented, with the increasing importance of non-kin (overwhelmingly voluntarily chosen friendship) relations.

In 1985, the General Social Survey in the USA found an average 55 percent kin ratio in core discussion networks. The results of this survey also showed that 30 percent of the networks consisted solely of family members of the ego, and almost 20 percent of only non-kin ties (Marsden, 1987). The closest available Hungarian data to this is from 1997 just when our research started. Then, still consistent with the traditional norms, on average 85 percent of the alters were kin, and 72.1 percent of the adult Hungarians had solely kin in their core discussion networks, and only 4.4 percent had exclusively non-kin CDNs. However, in 2015, the kin ratio decreased to 42 percent in Hungary, 27.4 percent of the surveyed population had only relatives in their core networks, and the largest group of adults (39.8 %) had solely non-kin confidants.

The increased presence of friendship ties in the CDNs is in line with the modernization argument, that communities of choice are becoming more important. Our multidimensional models strongly support this shift as we found that the ratio of kin ties decreased in core discussion networks over time (H1). It may be striking that from the several changes people in Hungary experienced, mostly changes experienced in other Western societies as well have been used to explain the shift in the kin/non-kin composition of CDNs, although the less fearful atmosphere of every day interactions in a democratic society may have had an effect as well (Völker and Flap, 2001). It seems plausible that a number of factors specific for post-communist societies may have a more significant impact on other segments of the interpersonal networks, on less strong ties. As core networks are expected to contain the strongest ties of the egos, similarly to what Völker and Flap (2001) identified as "niches" of trustworthy others, their changes may be prone to different factors than we might expect in relation to weak ties. The increased use of social capital in post-communist societies described by Sik (1994) and Sik and Wellman (1999) is also linked to coping with economic problems, the more instrumental functions of the networks.

It is also possible that there is a time-lag between social changes and the changes in people's personal network structures: the starting point of our analysis, almost 10 years after the system change, still bears the marks of the traditional norms mostly prevalent in the communist era, and it is only in the new millennium, when the consequences of modernization are manifested. Unfortunately, by 2015 it is unlikely for one to dismantle the impact of these two processes from each other. The growing importance of friends since 1990 in most European countries, including the economically less developed ones, seems to be universal and "results from the growth in post-materialist expectations centered on individual fulfilment and the quality of interpersonal relationships" (Bréchon and Gonthier, 2017:278).

A more detailed description of the relationship between respondents and alters (see Table A2 in the Appendix) indicates that among kin relations, spouses and partners had a highlighted position at the beginning of the analyzed period, which decreased significantly over time. In 1997, more than half (55 %) of the respondents mentioned their partner or spouse as a confidant, and this proportion gradually dropped to less than a third (28 %) by 2015. The importance of children in core networks also seems to be diminishing. The rate of those mentioning their child(ren) dropped gradually from 32 percent in 1997 to 17 percent in 2015. We can see a similar decrease in the role of other kin ties: while in 1997, 28 percent had such confidants; by 2015, this rate dropped to 11 percent. Among non-kin ties, friendship ties are noteworthy. The proportion of respondents mentioning at least one friend in their core networks went up from a mere 11 percent in 1997 to 58 percent in 2015. During the whole period in focus, only 4–5 percent of the respondents mentioned neighbors, and a slightly higher rate mentioned coworkers: their share among confidants, together with the prevalence of parents and siblings, are almost unchanged over the analyzed two decades.

Due to demographic reasons, both the available pool of family ties and the stability of families have decreased (Murinkó and Spéder, 2015; Kapitány and Spéder, 2015), and this may justify the dramatic decrease in the presence of partners and to a lesser extent, children among confidants over the period in focus, while parents and siblings seem to have a quite unchanged position in CDNs. It can be a plausible explanation that since people don't have enough kin relations, they replace the missing family ties with friends (David-Barrett, 2019). We can only partly support this statement. Although the share of those having a partner indeed decreased in our samples, as 62 percent had a partner in 1997, and 55 percent had a partner in 2015, the major change can be detected in whether an existing partner is mentioned as a confidant in the CDN or not. In 1997, 84 percent of the partners were mentioned as confidants, while by 2015, only half of them. The in-depth understanding of this emerging phenomenon seems especially important and would deserve further research.

Not only did we measure a decreasing rate of kin ties, but we also found that gender significantly affects the composition of the core discussion networks, with men having a higher ratio of non-kin ties than women, who have a significantly higher ratio of kin ties (H2a), and this effect does not change significantly over time (H2b rejected).

Current results greatly correspond to the results of friendship research in Hungary over the past decades. Those studies, applying different methods[8] also found significantly larger friendship networks for men (except for among those with tertiary education, as highly educated women had similar friendship networks to men), with the number of friends increasing along with the increase of educational attainment and income position. However, interpreting results of the survey conducted at the end of the 1990s, we found that although women systematically accounted for fewer friends than men, and significantly more women than men claimed to have no friends at all, women received at least the same amount of practical and emotional support from their fewer friends than men did. According to the results of gender-related friendship research (Rubin, 1985; Bruckner and Knaup, 1993; Fehr, 1996), for men, the definition of friendship had to include friends with whom, for example, they could spend free time but did not expect/receive support from, but for women, a basic criterion of defining someone as a friend was the provision of emotional support and being listened to (Albert and Dávid, 2018).

[8] We have comparable data for the question "How many friends have you got?" since the mid-1980s.

Our current analysis suggests that one can witness a possible transformation of male friendship definitions, a homogenization in the sense that similarly to female friendships, they increasingly include the provision of emotional support and empathy as a friendship criterion, and that is why an increasing number of friends are mentioned as confidants. We consider it to be in line with another finding, that by 2015 men no longer mention more friends than women do, while in previous years since the 80 s they always did, and the average number of friends mentioned is also decreasing, which may also reflect a more narrow, yet more gender-homogenous friendship definition, an indication of the fact that male friendships more and more intensively contain an element of emotional closeness and support (Albert and Dávid, 2018). Other studies also indicated increased homogenization of Hungarian core networks over the same period (Kmetty et al., 2017).

Also, as we have expected, the ratio of kin ties in the core discussion networks is larger among older people, while younger people have a higher ratio of non-kin ties compared to older ones (H3a), and this difference is getting stronger in the later survey years (H3b). The patterns we could identify support our assumptions that technological changes (Wang and Wellman, 2010), and the educational expansion contributed to the increase of friendship ties within the CDN, especially that this is more characteristic of young people in more recent survey years. As friendship networks are significantly positively influenced by the increase of educational attainment (Bruckner and Knaup, 1993; Albert and Dávid, 2018), the increase of the latter must have increased the available pool of friend-confidants. Additionally, as the findings of Mollenhorst et al. (2014) support, changing contexts and meeting opportunities are of key importance in the transformation of networks. This trend, on the one hand, provides more opportunities to form and maintain friendship relations, but also creates life situations in which friends may be more useful or appropriate sources of support than families which are decreasing in size, where the age of children and their parents increasingly diverge. The new context, the more diverse living conditions, probably modify people's answers as to what they consider problematic or important, thus influencing their choices as to with whom they discuss such matters. In addition, educational expansion often comes with social and geographic mobility, which may contribute to weakening ties with one's family of origin. In the analysis, we referred to the effect of age as it is, it can include the period and also the cohort effects, which are hard to detach from each other. Although the current paper has a different focus, this limitation shows further research potential in the understanding of the different age-, period- and cohort-related effects on core discussion networks.

Regarding social integration, an increasing network diversity (in this case, as, e.g., in Hampton and Ling, 2013, having both kin and non-kin ties) can be a positive phenomenon. However, it seems that, especially after 2011, the increase of non-kin ties happens at the expense of kin ties; that is, friends are not added to existing family ties, but instead of family members, friends become members of Hungarian CDNs. As we do not have panel data, we cannot be sure if it is a replacement, but it definitely seems that by now, a significant and increasing segment of the population does not have confidants from their families, only from among their voluntarily chosen friends. In this regard, our findings are contradictory to former research results in other developed countries, which claim that "societies with higher measures of well-being have comparatively smaller and more kin-centric core networks" (Hampton and Ling, 2013:580). On the other hand, Wöhler and Hinz (2007) also observed a somewhat similar change in the composition of networks over time: partners in Germany, who play a more decisive role than in the USA, become less important, whereas, in the USA, they substitute other discussion partners (Wöhler and Hinz, 2007). Despite the resilience of strong ties, new environments provide new opportunities for interaction with other people. It is possible that a large-scale social change affects everyday life so much that individuals can fulfill their new needs or obligations more by replacing an old tie with a new one, which can meet their needs better, so friendships may seem more adequate than family ties.

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Appendix A

Table A1
Descriptive statistics on the size and composition of core discussion networks in various countries and survey years.

	total no. of ties in CDN	mean no. of kin ties	mean no. of non-kin ties	no confidant in CDN (%)	type of survey
USA (1985) McPherson et al., 2006	2.94	1.44	1.42	8.9	cross-sectional
Germany 1988 Wöhler and Hinz (2007)	1.86	1.49	0.37	3.8	cross-sectional
Netherlands 1999/2000 Mollenhorst et al., 2014	2.37	no information	no information	13	panel longitudinal
Germany 2000 Wöhler and Hinz (2007)	2.12	1.63	0.49	4.9	cross-sectional
USA 2004 McPherson et al., 2006	2.08	1.12	0.88	24.6	cross-sectional
Netherlands 2006/2007 Mollenhorst et al., 2014	2.41	no information	no information	12	panel longitudinal
Ukraine 2008 Hampton and Ling (2013)	3.78	2.11	1.67	1	cross-sectional
US 2008 Hampton and Ling (2013)	1.93	0.93	0.78	12	cross-sectional
Norway 2008 Hampton and Ling (2013)	2.58	1.48	1.06	15	cross-sectional

Table A2
The proportion of respondents among those with at least one confidant, naming a given relationship category to alters by year of survey, %.

Type of Relationship to Respondent	Spouse/partner	Parent	Sibling	Child	Other kin	Friend	Neighbour	Coworker
1997	55	24	11	32	28	11	4	6
2004	57	25	14	27	14	24	4	7
2011	40	22	11	22	12	46	5	3
2015	28	23	10	17	11	58	5	7

Appendix B. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.socnet.2021.02.005.

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