

## Differences in the sizes and supportive quality of social network between healthy and suicidal women, and the relationship between characteristics of social networks and shame

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**Keywords:** suicide, borderline personality disorder, shame, social network, ego-alter relationship

**Abstract:** Human relations might be sources of social support and well being, while their absence is related to mental health problems. Chronic feeling of shame could lead to social avoidance. Reduced number of relations and low levels of intimacy in these relations could be risk factors for individuals contemplating suicide. We analyzed the sizes and the quality of ego-alter relations of inner social circles as defined by Dunbar and the effects of shame on one's social support in women right after suicide attempts and in a matched healthy control group. Sizes of inner social circles of patients were found significantly smaller ( $p < 0.01$ ; patient group:  $M: 3,54$ ,  $SD: 3,08$ ; control group:  $M: 7.94$ ,  $SD: 2,85$ ) as well as the perceived social support coming from these circles ( $p < 0.01$ , patient group:  $M: 2.11$ ,  $SD: 0,65$ ; control group:  $M: 2,54$ ,  $SD: 0,34$ ). Those with BPD within the patient group felt they could depend on their relatives less than individuals without BPD in the patient group. We found significant negative correlations between the levels of shame and the quality of people's inner social network among healthy participant. Activated social network size is reduced and the quality of ego-alter relationship is less supportive among suicidal patient. Shame has a small effect on the network quality especially among healthy participant.

## **Ethnic preferences at romantic partner selection in case of secondary school students: the effect of heterogeneity**

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**Keywords:** adolescents, multilevel analysis, partner selection, ethnicity

**Abstract:** Group composition (opportunities) and preferences are usually treated as two separate factors affecting partner selection. Previous research has shown that opportunities affect partner selection: for example more heterogeneous areas result in more heterogeneous marriages (Blau and Schwartz 1984). This study raises the question whether (ethnic) group composition have a direct effect even on (ethnic) preferences themselves. Based on the research course of contact theory (Pettigrew, 1998) the hypothesis can be put that such interaction exists.

The first wave data of the Hungarian network panel "Wired into Each Other" was used for analysis, containing data of 1224 9<sup>th</sup> grade students in 44 classes of seven Hungarian secondary schools. Ethnicity (roma and non-roma) was based on self-assessment. Three levels of preferences were measured: (1) Perceived norm of dating with someone with roma origin, (2) Individual attribution of physical attractiveness of each classmates, (3) Individual preference for dating each classmates. Multi-level regression models were used for analysis: two-level linear model in case of the norms, three-level logistic models (level 1: tie, level2: individual, level 3: class) in case of the attractiveness and preference for dating.

Increasing share of roma students in the class was found associated with increasing acceptance of dating with roma students. Additionally, increasing share of roma students was associated with increased attributed physical attractiveness of roma classmates. Both norms and perceived physical attractiveness affected preference for dating, and share of roma students did not have an independent effect after controlling these.

**The language of the presentation :** magyar/Hungarian

## Factors effecting loyalty of general practitioners towards specialists

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**Keywords:** loyalty, general practitioner, specialist

**Abstract:** Nowadays governments place greater emphasis on primary and secondary care integration. The aim of this integration is to achieve better and smoother patient care, better collaboration between health care professionals and an effective balance between community and hospital-based care. In line with this our research aims to investigate the major socio-demographic and network topological factors influencing the loyalty within the two main branches of medical profession, namely the general practitioners (GP) and the specialists.

The research questions are as follows: (i) Are GPs loyal to specialists? (ii) Does a GP send the majority of its patients to the same specialist, or is there a sophisticated matching process? The first research question is important, because if GPs are loyal to and respect the specialist to whom they are referring, then they could build up the referral in the patient's eye. This confidence improves the outcome of the interaction on both the patient's and the doctor's part. The second research question is important, because the appropriate matching – that is, suiting personalities and empathy with the specialist – result in more efficient treatment.

The presentation will be structured as follows: First, we introduce the literature of patient choice. Based on this literature we determine the factors influencing the matching process. Second, we analyze statistically the loyalty of the GPs to specialists. Finally, we try to find systematic evidence for the matching process on a large-scale dataset, which process was only proven anecdotally in the literature before.

## **In respectable society: on how networks shape grand corruption in Hungary**

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**Keywords:** corruption, state capture, public procurement

**Abstract:** Particularism and grand corruption are widespread phenomena in Hungary which are associated with a range of social and economic maladies such as low economic growth or deficient democratic process. This paper explores how networks shape particularism and grand corruption in the context of public procurement throughout 2008-2012. To this end, it first establishes a robust measure of corruption risks in public procurement transactions using data of over 60,000 contract award announcements. Second, it constructs a network of key actors (i.e. issuers and winners of tenders) which represents contractual relationships among them as recorded in public procurement announcements throughout this period. Finally, it systematically explores how network structure impacts on corruption risks in public procurement. Preliminary findings indicate that high corruption risk actors cluster together suggesting partial appropriation of the Hungarian state by powerful groups. The change of government disrupts the particular networks in place while similar network formations arise within a short timeframe suggesting institutionalised corruption operating at the highest echelons of the Hungarian society. Our findings emphasize the systemic, networked, and institutionalized nature of corruption and the relevance of the social orders (see Douglas North and others) as well as governance regimes literature (see Alina Mungiu-Pippidi and others) for understanding the political economy of Hungary.

## **Interethnic relations and ethnic classification by peers: is there a connection?**

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**Keywords:** interethnic friendships, adolescents, ethnic classification, multilevel regression

**Abstract:** Interethnic relations could be the source of social and cultural capital for minority students. However, international research indicates that even if students study in ethnically mixed classes, cross-ethnic friendships are rare (Moody, 2001). Friendship segregation within classes has not yet been examined thoroughly in Hungary. While examining interethnic relations, nevertheless, difficulties may arise, because the formation of one's identity occurs continuously through one's identification with significant others. Therefore, ethnic identity, being both relational and contextual, should be treated as a continuously changing process (Hall, 1996; Ladányi and Szelényi, 2001). Moreover, various classification systems may provide different data concerning students' ethnic identity, and self-reported information on ethnicity of minority students may also change in time depending on the social environment. In our study we suggest, there is a connection between self-reported information on ethnicity, classification by peers and relational integration with classmates. We therefore hypothesize that students who identify themselves as Roma but are classified as non-Roma by a significant proportion of their peers are more likely to have a higher amount of positive interethnic relations than those who are classified as Roma by their peers. Our research is based on a subsample (N=25 classes) of a Hungarian network panel study (OTKA K 81336). For data analysis, multilevel regression model is used.

**The language of the presentation:** English

## Negative Ties or the Lack of Positive Ties? - Ethnic Segregation in Secondary School

**The presenter(s) name, e-mail address and institution:**

Bálint Néray;  
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**key-words:** ethnic integration, positive and negative relations, ERGM

**Abstract:** Ethnic integration, and specifically the problem of integrated education of students from different ethnic backgrounds, is the subject of serious socio-political debates. Advocates of integrated education often argue that in integrated school and classroom settings minority students have more opportunities to develop interpersonal relationships with the majority group. Through more developed positive connections, majority and minority groups get to know each other better, and through better knowledge one expects prejudice to decrease. However, empirical evidence suggests this not direct consequences of integrated education, since relationships themselves can still remain segregated in spite of the formal integration. Moreover, the level of friendship segregation seems to be the highest in classes with two similar sized ethnic groups.

Nevertheless, for a more detailed picture it seems crucial to examine not only positive but also negative ties between students. Even if everyone has less friends from the other ethnic group(s) than from their own, this situation still can be more advantageous than the one in which ethnically different students do not even meet each other, so they do not have friends from the other group at all – but this is true only if the non-positive ties are mostly neutral and not negative ones. In our presentation, we focus on the effect of ethnicity (Roma and not Roma people) on negative ties in classroom networks. For the analysis, Exponential Random Graph Models are used. Our dataset contains 20 secondary school classes from 5 Hungarian schools.

## Political Position Generator: New Ways in Studying Electoral Segmentation

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**Keywords:** egocentric network techniques, political position generator, political networks, polarization, negative ties.

**Abstract:** Political homophily and heterophily, relational patterns of personal political communication, just as the polarization of electoral landscape are emerging research topics in the field of political networks. Even if basically of macro-level character, these issues are plausibly approached by egocentric network techniques as well. The now classic position generator by Lin and Dumin yields certain ways for studying social network resources going beyond the circle of core ties. While focusing on occupational positions in its original formulation, it also permits various types of extensions (as outlined in detail by Lin-Erickson 2008; building on its basic setup with significant rearrangements, McCarty et al 2001, and on similar lines DiPrete et al 2011 have brought further methodological innovations). Based on the position generator technique, again, Angelusz and Tardos (2005, 2010) have introduced a party-focus version by which electoral bloc milieus, just as related structural holes (Burt 1992) and structural folds (Stark-Vedres 2010) can be assessed through the presence, respectively, the lack (or possible overlap) of acquaintanceship ties to various parties. A newer version of this technique extends toward actual occurrences of communication, furthermore, relationships of negative sign (hallmarking aversion). The question battery is planned to be inserted in the 2014 online module of the German Longitudinal Election Studies; the personal interview version, in turn, is being applied by a project on ideological and political cleavages in Hungary led by Zoltán Fábíán. With a spring 2013 survey start, some first data have been scheduled to appear by the date of Hunnet. The presentation will also cover some findings of the first domestic adaptation (by Kmetty and Koltai 2013) of the McCarty et al (estimated size generator) method.

## Reasons to Hate Mates: Effects of Status Considerations on Disliking Relations in the Classroom

**The presenter(s) name, e-mail address and institution:** Judit Pál, mail: [pal.judit@tk.mta.hu](mailto:pal.judit@tk.mta.hu), [MTA TK “Lendület” Research Center for Educational and Network Studies (RECENS), Corvinus University of Budapest];  
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**Keywords:** disliking, status considerations, SIENA models

**Abstract:** Structural balance theory could explain how disliking ties (when one actor has negative feelings toward another) occur and result in segregation of positive and negative ties within a community. If, for example, actor  $i$  dislikes actor  $j$ , then  $i$ 's friend  $k$  may turn to dislike  $j$ , as well. We believe, however, that not all disliking relations are there because of balance considerations. In this paper, we argue that the occurrence and dynamics of disliking ties could largely be explained as a consequence of status-related frustration and competition within a community. Consequently, we claim that we should differentiate and analyze the connection of directly measured status ( $i$  respects  $j$ ) and perceived status ( $i$  thinks that  $j$  is respected by the others) from friendship based in-degree popularity in order to estimate status dominance as strong influence on how disliking relations changes in time. This allows us to test three hypotheses on how status considerations may influence the formation of disliking relations. First, the *frustration hypothesis* suggests that asymmetric disliking ties are more likely to develop from  $i$  to  $j$  when  $i$  has a high in-degree on perceived status attributions, but does not receive a personal attribution from  $j$ . Second, the *competition* hypothesis states that reciprocal disliking ties develop more likely when both  $i$  and  $j$  have a high in-degree on perceived status attributions, but they do not nominate each other directly. Third, the *tension reduction* hypothesis states that disliking ties are more likely to develop when  $j$ 's status considerations are dissimilar among friends, but they agree on having a disliking tie toward the same  $j$ . We present preliminary results using descriptive network statistics and SIENA models by analyzing classroom networks of the first three waves of the Hungarian high-school dataset collected by RECENS.

## Self-referential System Network

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**Key-words:** self-referentiality, operations, system network

**Abstract:** Niklas Luhmann's self-referential system theory is based on a kind of operational epistemology, which we can use as a basis for a formal theoretical approach to self-referential systems. According to this approach, operations can be defined between both systems and the elements of these systems and these operations create a network-linked structure. The nodes of this network are Luhmann's psychic and social systems – self-referential systems – that are embedded into each other and form increasingly larger systems. These systems are both nodes and subnet of the network. The edges of the network are the effects that are formed by operations of nodes (as systems). The system – environment relationship is established among nodes of the system and the states of the nodes are defined by these conditions. We can define a general self-referentiality model that displays the interrelations between the change of state of nodes.

**The language of the presentation:** magyar/Hungarian

## Signed Networks and The Evolution of Cooperation

**The presenter(s) name, e-mail address and institution:**

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**Keywords:** evolution of cooperation, signed networks, structural balance, conditional cooperation, reputation, agent based modeling, Prisoner’s Dilemma

**Abstract:** We examine how cooperation can be supported by negative ties and structural balance mechanisms. Previous research has demonstrated that cooperation is more likely to evolve in social dilemma games, such as the Prisoner’s Dilemma (PD), if the game is played in networks. The network topology is also important because on top of direct relational effects, indirect relations contribute to the establishment of cooperation through reputation mechanisms. All previous research, however, assumed only positive relations between the players.

Following the hint provided by the efficiency of altruistic punishment, and psychological mechanisms of vengeance and social threats, negative dyadic relations could potentially be better enforcers of cooperation than positive ones. Furthermore, at the *triadic level*, we hypothesize that structural balance mechanisms could confirm expectations of cooperative intentions and hence support the emergence of stable network clusters of cooperation. We incorporate both dyadic and triadic mechanisms in an agent-based model in signed networks. Strategies are composed of two elements: game behavior (cooperation or defection) and sensitivity to the signs of direct and indirect links to the partner.

We show that with local strategy update, in the presence of negative ties, cooperation is difficult to sustain in a random network where only dyadic considerations affect behavior. However, introducing triadic considerations (the tendency to construct structurally balanced relationships) enlarges the window of opportunity for the diffusion of cooperative behavior while allowing for the emergence of stable cooperative clusters.

**The language of presentation:** English

## **The emergence and development of Social Network Analysis in Spain and Latin-America**

**The presenter(s) name, e-mail address and institution:** Feleky Gábor Attila, felekygabor@gmail.com, Corvinus University of Budapest

**Keywords:** social network analysis, network study, history of science, co-authorship, Spain, Latin America

**Abstract:** In my presentation I offer an overview on the major milestones of the development of social network analysis in Spain and Latin America. I present the most significant relevant publications, and those persons who had contributed the most to the spread of the network analysis approach in Spanish-speaking countries. By analysing the co-authorships of the articles published in the most important Spanish-language social network analysis journal, I reveal a scientific co-operation network of Spanish-speaking social network researchers. The presentation also includes an analysis of publications of two major social network journals in order to explore how Spanish-speaking network research can be seen by the Anglo-Saxon scientific community.

**The language of the presentation:** magyar/Hungarian

## The network of network science

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**key-words:** network science, social network analyses, author network, citation network

**Abstract:** Network science is treated as an interdisciplinary science. The bases of network science – like many other disciplines – can be connected to mathematics and physics. Social network analysis is mostly based on sociology. The first applications go back in the 19th century. Nowadays a lot of disciplines are applying the theories and methods of network science. Several studies could be found related to network science in journals of various disciplines, for example: mathematics, physics, sociology, geography, regional science, biology, medical sciences, literature, linguistics, and informatics. Also sections of many network conferences have wide range of other disciplines (e.g. NetSci).

Firstly, the theoretical background, then the citation- and author network of the main articles with SNA methods will be presented. The study aims to answer whether the hubs of network science could be connected to any persons or science fields. The study also tries to answer whether there are any distributions of tasks between the disciplines in relation with theoretical and practical issues of network science.

**The language of the presentation :** The both are good for me.

Magyar / Hungarian

Angol /English

## The networks of people living with disabilities

**The presenter(s) name, e-mail address:** Ildiko Laki, [laki.ildiko@socio.mta.hu](mailto:laki.ildiko@socio.mta.hu)

**Abstract:** In my presentation I will introduce the NGOs and support networks of people living with disabilities in Hungary. The position and conditions of the disabled in Hungary to a large measure depend on the success and effective work of such NGOs. Currently in some cases tangible results are achieved while in others there is still room for development. The main goal of the presentation is to search for feasible ways as to mould all these various actors into a truly cooperating and even more effective network.

## Thematic or National?

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**Abstract:** According to Barabási the structure of the Web is organized by interconnected themes, like regions, states and different topics. Thus the links between homepages depend on the themes and the nationality of the homepages.

**The aim of the research is:** determine the organizing factors (themes or physical features) of the web in the case of the European Ubuntu Communities. The main goal of these communities are to localize and to distribute the Ubuntu Linux operating system.

**Research method:** We have set up a database, that contains the ego-networks of the European Ubuntu community's homepages, and variables like EU membership of the country, phylum, measurements of the internet usage in the households, neighbourhood etc. We collected the data in August 2012: we crawled the homepages of the national Ubuntu communities (for instance ubuntu.hu), and we collected all the links on it. We found some home-pages that were available from other community homepages as well, thus there were overlapping sites.

**Results:** we could set out that the proportion of the overlapping pages, do not depend neither on the social (phylum, internet usage, EU membership etc.) nor on the physical features (neighbourhood). Secondly we could verify the hypothesis, that in that case the structural factor is the subject, the thematic of the homepages. Because of the low proportion of the overlapping pages we cannot claim that the Ubuntu communities participate in a global movement -- they rather seem to be weekly connected communities organized on national grounds.

## What could be the next steps? Methodological problems on the Online Networks research field

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**Keywords:** self-referentiality, operations, network systems

**Abstract:** Within research processes of Online Networks it is common for scientists to use robots, crawlers or other types of programs for data collection. The webcrawlers are computer programs, which browse the web automatically. The usage of these programs open a window to the future of sciences. They also could become a very useful tool in the hand of the social scientist to chart and to analyze online contents.

In our presentation we will delineate the pitfalls of the social research based on data collection made by crawlers, from the collection phase to the phase of the interpretation. We will discuss the questions, (1) what are the benefits of the usage of crawlers (2) what could be the difficulties of the application, (3) how can manage the functioning of the program the results, and (4) what kind of decisions have to make programmers?

We will investigate the possibilities of the data interpretation as well. If we accept the concept that the links are made via human activities we could understand the contents or meanings of these actions. These understandings although, need deeper sociological investigation. For example we need to learn what the meaning of the final network is, what kind of contents the nodes (actor, organization, piece of information etc.) create and what sort of links the nodes (tube, co-work habits, friendship, good or bad references etc.) have between each other?