Information and knowledge networks in organizations (ÚNKP-19-3-I-BCE-163)

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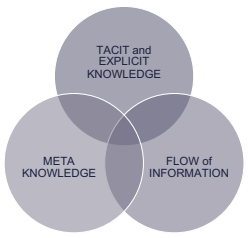
The networked nature of knowledge creation

In knowledge-based organizations, knowledge and innovation is created as the result of collaboration, co-thinking, and co-creation (Nonaka et al., 1995; Phelps et al., 2012; Vohra et al., 2016).



- Advice-seeking
- Knowledge sharing
- Collaboration

Different motives of advice-seeking (Cross et al., 2001)

1. Generate solutions
2. Develop meta-knowledge
3. Reformulate problems
4. Validate plans and solutions
5. Legitimate through affiliation

Knowledge networks

- Knowledge networks are interconnected systems of actors who aim to **share knowledge** and **generate new knowledge** through a combination of knowledge elements (Škerlavaj, Dimovski, & Desouza, 2010; Tortoriello, Reagans, & Mcevily, 2012).
- Networks = actors + relationships + flows
- Actors: (1) knowledge owners, (2) intermediaries, (3) creators
- Relationships: (1) tools of recombination, (2) channels, (3) filters
- Sharing of tacit knowledge
- Ambient awareness (who knows what and who knows whom)
- Knowledge-sharing often occurs in informal relationships that remain in the **blind spot of managers**. A network perspective might help to explore these relationships that would otherwise be missed from organizational charts (Phelps et al., 2012).

Motives of advice-seeking behavior

Solution: a piece of information or knowledge that helps to resolve a task or answer a question.

Meta-knowledge: information on who knows what and who knows whom.

Re-definition of a problem: the seeker gains new perspectives that might help to reformulate their original problem.

Confirmation, reassurance: advice-seekers aim to reinforce their previous knowledge and gain self-confidence.

Legitimacy: the source of expertise legitimate the knowledge itself by his personality (e.g., position, public image)

Research questions

Which relationships affect advice-seeking in an organizational knowledge network?

- Do they increase or decrease the probability of advice-seeking?
- Which actors tend to be in central positions?

Data sample and methods

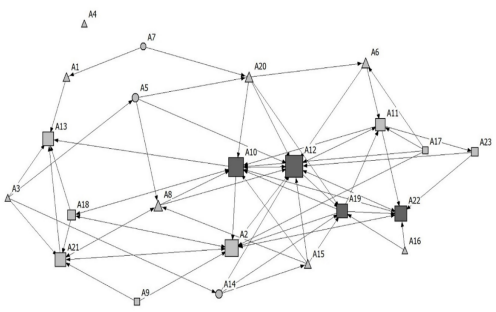
Questionnaire (paper-based), 21 respondents
Relational data and evaluations

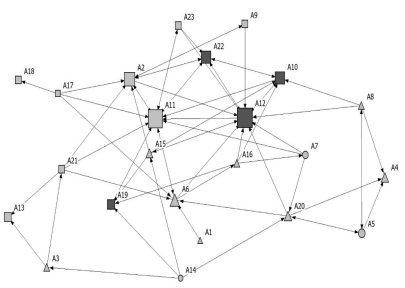
- Whom do you like to meet outside the workplace? (Sympathy)
- Whom do you turn to if you need to discuss personal problems? (Trust)
- Which of your colleagues stand out with their expertise? (Competence)
- Whom do you turn to for knowledge or advice related to your work (Advice-seeking)

UCINET analysis (network mapping, centrality measures)
SPSS 25 analysis (binary logistic regression)

Count					
		Position			
		Intern	Junior	Senior	Total
Age	<25	1	0	0	1
	25-30	2	7	1	10
	31-35	0	0	2	2
	36-40	0	0	7	7
	41-45	0	0	1	1
Total		3	7	11	21

Advice-seeking and trust relationships





intern junior senior partner

intern junior senior partner

Regression model

Dependent variable: advice-seeking relationships
Independent variables: trust, sympathy, and perceived competence
The resulting model has significant explanatory power (χ^2=141,580; p=0,000; Nagelkerke R^2=0,453). The Hosmer-Lemeshow test result is not significant (p=0,454) which means that my model fits measured data.

Variables included in the binary logistic regression model						
	B	S.E.	Wald	df	Sig.	Exp(B)
Sympathy	-1,039	0,527	3,887	1	0,049	**0,354**
Trust	3,242	0,462	49,179	1	0,000	**25,581**
Perceived competence	2,452	0,353	48,332	1	0,000	**11,615**
Constant	-3,240	0,253	163,418	1	0,000	0,039

Selected literature

- Ahmed, F., Hassan, A., Ayub, M. U., & Klimoski, R. (2018). High Commitment Work System and Innovative Work Behavior: The Mediating Role of Knowledge Sharing. *Pakistan Journal of Commerce and Social Science*, *12*(1), 29–51.
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, *25*(1), 107–136. https://doi.org/10.2307/3250961
- Borgatti, S. P., Brass, D. J., & Halgin, D. S. (2014). Social network research: confusions, criticisms, and controversies. In D. J. Brass, G. Labianca, A. Mehra, D. S. Halgin, & S. P. Borgatti (Eds.), *Research in the Sociology of Organizations*. Bradford, UK: Emerald Publishing. https://doi.org/10.1108/S0733-558X(2014)0000040001
- Borgatti, S. P., & Cross, R. (2003). A Relational View of Information Seeking and Learning in Social Networks. *Management Science*, *49*(4), 432–445. https://doi.org/10.1287/mnsc.49.4.432.14428
- Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2002). Ucinet for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies.
- Casciaro, T., & Sousa Lobo, M. (2005). Competent Jerks, Lovable Fools, and the Formation of Social Networks. *Harvard Business Review*, *83*(6), 92–99.
- Cheng, J.-H., Huang, J.-K., Zhao, J., & Wu, P. (2019). Open Innovation: The Role of Organizational Learning Capability, Collaboration and Knowledge Sharing. *International Journal of Organizational Innovation*, *1*(3), 260–272.
- Csontos, R. S., & Szabó, Z. R. (2019). Hálózati tanulás – tanuló hálózatok. *Vezetéstudomány*, *50*(1), 2–13. https://doi.org/10.14267/VEZTUD.2019.01.01

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