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Managing information in forest policy networks: Distinguishing the influential actors from the "postmen"☆

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ABSTRACT

What differentiates the influential actors imposing information as salient from a "postman" who redistributes it is the main question of this research. Complete network analysis has been conducted in 8 European countries including 421 actors. Determinants differentiating influential actors from "postmen" in general information arena are: a) to be capable of achieving single strategy (by not having to be confronted with strong internal individual potentials, namely members with considerable strengths), b) to be free of dogmatism, c) to have powerful cooperators, and d) to employ appropriate expertise, characterized by objectivity- and specialty-based legitimacy. Determinants differentiating influential actors from "postmen" in scientific information arena are: a) to gain the trust, b) to intend cross-sectoral cooperation, c) to be a scientific institution, d) (or) to be an interest group, and e) to employ appropriate expertise characterized by credibility. Scientific institutions (universities and research units) are not so distinct in scientific information compared to non scientific participants. Internal resources related to member strengths or qualifications, or external consulting do not make significant difference on the salience or "postman" role. Extensive expertise does not favor the salience or "postman" role in scientific information. Salience of appears to be power-dependent.

1. Introduction

In order to clarify the basic question of this paper, it is appropriate to begin with an example of everyday life: If someone wants to have an application for a loan approved by the bank, ideally he should intend to be directly informed from the director of the bank about the progress of his application so as to try to influence him before he makes the final decision and not to be informed from the clerical assistant of the bank who is going to bring the answer as a "postman". In case of the bank, it is clear who the decision maker and who the "postman" is. In case of a policy network (formal and informal structures of power and other relations focusing on particular issue), it is often unclear which actor (meaning not individual physical persons but any kind of organization such as public agency, semi-state body, association or enterprise) is the one which imposes information as salient and thereby influences policy and politics and which a "postman" is that merely transfers this information to other participants of the network and the most it can do is only control the flow of the information.

In lobbying it is important to invest time in trying to contact the actor which can select and impose information (and arguments) as relevant to the others (Krott, 2012) and, subsequently, is able to set agenda, norms and impose values and ideologies (e.g. what is "environmentally dangerous", what are the "appropriate solutions" for the "– main problems" of a national forestry etc.) and not to lose time dealing with the one which plays the role of a "postman" of this information. However, many participants in a policy network cannot clearly distinguish the really influential actor from the "postman".

The basic question of this research is to propose features letting influential actors emerging and differentiating them from the "postmen" in general and in scientific information arena. The influential actors by definition attract numerous other actors which desire to be directly informed by them, as they regard their information as salient, namely relevant for "solving problems". What makes an actor "salient" for the others? The awareness of such determinants can be useful for an actor who desires to be influential or to a new participant in a network who intends to evaluate more accurately who the influential actor is so as not to lose time trying to change the mind of a "postman". The influential actor possesses strong persuasion potential and can thus influence decisions, attitudes, policy contents or even politics. A "postman" can mainly destroy the flow of information by not redistributing it but it cannot intentionally promote (or hinder) a meticulously designed and intended change. In other words, distinguishing influential actors from "postmen" is a basis of effective lobbying.

The main hypotheses and questions which are going to be examined are the following:

- The power (in terms of trust, financial incentives and coercion based on irreplaceablity) strengthens the ability of an actor to impose selected information as salient

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- Do science-related attributes and resources of an actor, such as its possible scientific identity (university or research unit), its state or private character, its external consulting or internal expertise, affect its salience in scientific or general information? And which kind of expertise does matter?
- Dogmatism, though it is a characteristic of powerful actor, leads up to negative impact on its salience
- Which are the main characteristics that differentiate salient actors from the "postmen"? Are they immanent characteristics and particular resources of an actor (non-network characteristics) or structural external conditions (network-related characteristics)? The correlation of certain network-related characteristics (s. vertical column of Table 1) and non-network-related characteristics (s. vertical column of Tables 2 and 3) with salience and "postman" property will be examined.
- Not only the characteristics of the actor or its own resources (such us expertise) but also of its network environment, such as cross-sectorality, may create the need to use scientific information as a tool of imposition and integration

2. Literature review

The role of dominant information (Krott et al., 2014) has been emphasized as a core power-related element. According to Cash et al.'s (2002) model, three factors can be identified that shape the importance of information; salience, credibility and legitimacy. The salience, namely the relevance that information seems to have for the choices, is of direct significance for influencing while credibility and legitimacy can be examined as determinants influencing salience.

Either an actor (scientific institutions) is influential or not should be critically examined (Pielke, 2007) in terms of salience. In extension of this logic, it will also be examined whether expertise does matter. The role of basic dimensions of power, namely gaining trust, offering incentives and exerting pressure by being irreplaceable, of cooperators (allies) power, of the dogmatic attitude of an actor to the others involved in the network and other network- and organization-related characteristics (Hasanagas, 2004) as well as basic network characteristics such as cross-sectorality (Krott and Hasanagas, 2006; Giessen and Krott, 2009; Giessen, 2010) will also be examined.

Janse (2006, 2008) has provided an insightful approach, proposing information types (policy process, legal instruments), personal-related sources etc. as well as a discussion on science/policy interface. He focused on questions about information supply and accessibility and he provided interesting results on the difference between policy-makers and scientists perceptions about what the relevance of information determines. The role of stakeholder participation and of the uncertainty articulation in the flow of scientific information (Joyce, 2003) as well as of possible conflicting scientific information in policy making (Ellefson, 2000) has also been discussed implying issues of reliability, and, subsequently, of credibility and legitimacy. However, further insights in the role and properties of particular expertise areas in policy arena would be desired.

Böcher and Krott (2010) have pointed out the meaning of trust in forest and environmental policy making and have elaborated models of interaction between scientific and politico-administrative arena (RIU-models). Stevanov et al. (2013) have further applied RIU models in science-based policy advice trying to support them with detailed case studies. Further suggestions of letting these models function would be useful.

3. Method

In this research, social network analysis has been applied in 27 forest policy-related networks of 8 European countries which have been entered in a single data bank from 2002 until 2011. The first actor of each network was randomly selected from a list of forestry actors and it was asked about a forest policy issue in which it was "successful" according to its self-assessment and about other contacts it had concerning this issue. Snowball sampling was continuously conducted in each network until new actors ("nodes") involved in the particular issue cease to appear. Such a social network analysis is usually called "complete" though certain limitations can be posed, i.e. one may claim

Table 1
Network-related determinants of salience and "postman" role.

	Simple salience ingeneral information (CC %)	"Postman" of general information (BC%)	Simple salience in scientific information (CC %)	"Postman" of scientific information (BC %)	Tendency to pure salience in general information (difference: CC-BC)	Tendency to pure salience in scientific information (difference:CC-BC)
Concentration of *trust* relation gained (in-degree %)	.702([a])	.348([a])	.485([a])	.280([a])	.063	.141([b])
	.000	.000	.000	.000	.340	.031
Concentration of dependence gained by offering *incentive* (in-degree %)	.228([a])	.243([a])	.306([a])	.255([a])	−.153([b])	−.076
	.000	.000	.000	.000	.019	.245
Concentration of dependence based on *irreplaceability* (in-degree %)	.515([a])	.384([a])	.382([a])	.311([a])	−.050	.017
	.000	.000	.000	.000	.445	.795
Self-assessment of power of each actor (from 1 to 3)	.154	.128	.091	.057	−.056	−.002
	.063	.123	.277	.496	.504	.980
Radicalism ascribed by other actors in each network (from 1 to 3)	−.033	−.075	−.160([b])	−.149([b])	−.023	−.051
	.610	.254	.015	.022	.731	.439
Dogmatism ascribed by other actors in each network (from 1 to 3)	−.086	−.011	−.084	−.128	−.148([b])	−.009
	.191	.867	.199	.051	.023	.889
Power of cooperators (total trust, incentive- and irreplaceability-based dependence %)	.422([a])	−.012	.102	.054	.163([b])	.071
	.000	.881	.214	.510	.047	.389
Cross-sectorality of each network (from 1 to 11) sectors)	−.109([b])	.026	.095	−.186([a])	−.003	.159([a])
	.038	.626	.072	.000	.955	.003
Unambiguity of program content of each network as perceived by each actor (from 1 to 3)	−.131([b])	−.069	−.119	−.137([b])	.006	−.017
	.046	.292	.068	.036	.924	.801
General information concentrated by each actor (in-degree %)	.122	.710([a])	.064	.377([a])	−.579([a])	−.353([a])
	.062	.000	.333	.000	.000	.000
Scientific information concentrated by each actor (in-degree %)	.218([a])	.536([a])	.249([a])	.457([a])	−.367([a])	−.305([a])
	.001	.000	.000	.000	.000	.000

Spearman test.
[a] Correlation is significant at the 0.01 level (2-tailed).
[b] Correlation is significant at the 0.05 level (2-tailed).