



# Effects of competition on collective learning in advice networks



Emmanuel Lazega<sup>a,\*</sup>, Avner Bar-Hen<sup>b</sup>, Pierre Barbillon<sup>c</sup>, Sophie Donnet<sup>c</sup>

<sup>a</sup> Institut d'Etudes Politiques de Paris, CSO-CNRS and SPC, 19 rue Amélie, 75007 Paris, France

<sup>b</sup> MAP5, UFR de Mathématiques et Informatique, Université Paris Descartes, 45 rue des Saints-Pères, 75270 Paris cedex 06, France

<sup>c</sup> AgroParisTech/UMR INRA MIA 518, 16 rue Claude Bernard, 75231 Paris Cedex 05, France

## ARTICLE INFO

### Article history:

### Keywords:

Multiplex stochastic block-modeling  
Advice networks  
Relational infrastructure  
Cut-throat competition  
Friendly competition  
Collective learning

## ABSTRACT

This paper looks at the effect of identifying alters as direct competitors on their selection as advisors. We differentiate between two kinds of competition: cut-throat vs friendly. We argue that, unlike cut-throat competition, friendly competition makes collective learning possible as a social process: when knowledge is built in interactions that are able to mitigate the negative effects of status competition and take place in homophilous social niches; and when the quality of this knowledge is guaranteed by members with epistemic status in these niches. Social niches and status facilitate advice seeking and collective learning because advice seeking between direct competitors is not obvious even when members have a common interest in sharing advice – a learning-related dilemma of collective action. We apply this reasoning to a network dataset combining identification of direct competitors and selection of advisors among the elite of cancer researchers in France. We use a procedure of multiplex stochastic block-modeling designed by Barbillon et al. (2015) to measure the effect of these identifications of direct competitors on the structure of the advice network. Results obtained with this dataset support our theory.

© 2016 Elsevier B.V. All rights reserved.

## 1. Is it rational to seek advice from direct competitors?

In her book on the legacy of high stalinism in China, *Dream of a Red Factory* (Kaple, 1993), Deborah Kaple tells a surprising anecdote of rotten advice shared between two powerful leaders at the highest level of geopolitics. This story begins 1949 with Comrade Mao waiting for weeks in his hotel room in Moscow before he is able to meet Comrade Stalin and seek advice about how to rebuild China after the 1949 Revolution and civil war. Stalin advises to implement in China a Soviet post-WWII Recovery Plan. He presents the Plan to Mao as a great success in rebuilding the Soviet Union in just five years. In fact the Plan worked in the Soviet Union in part because a “very large backlog of unexploited economic potential and more efficient repression were two sources of postwar Soviet economic resilience” (Harrison, 1985); the other part of the Plan was propaganda. Therefore the Chinese revolutionaries should not have trusted and taken at face value the idea that this overambitious and long-range Plan was recyclable at home. By taking the advice and using the Plan to organize the Chinese buildup, Mao fails and ends up wasting a decade of Chinese economic history (and probably

dozens of millions of lives due to famine). Relationships between the two powers will more than suffer for two generations as a consequence. One could guess that, in this story, Mao does not think of Stalin as a direct competitor but as a Comrade, perhaps only as a “friendly” competitor. But Kaple (1993) shows that Stalin and his thousands of Soviet experts – who were sent to China to further advise – despise the Chinese and probably think in terms of direct competition between their leaderships and opposition between their countries. Such an asymmetry raises a more general question: What is the effect of competition on collective learning, i.e. on the way in which we think with others and build common knowledge with them? In some ways, competition should terminate the social exchange between advisor and advice seeker because it makes listening to advice provided by a “cut-throat” competitor quite risky. That piece of advice could be difficult to evaluate, if not rotten. But obviously it is not that simple. Sometimes actors do not have much choice in terms of selection of advisors. In other circumstances, many – like Mao – think that it is still rational or reasonable to seek advice from friendly competitors, if not from cut-throat competitors, but that assessment can be wrong. Thus the question becomes Under what circumstances do actors define a direct competitor as friendly, as opposed to cut-throat, and seek advice from him/her?

We can rephrase this question from a more theoretical perspective in sociology. At the individual level, status competition is both stimulating and potentially detrimental for individuals (where it can cause stress, frustration, and anti-social tendencies, to put it mildly). At the system level, it can hold members with status

\* Corresponding author. Tel.: +33 140626570.

E-mail addresses: [emmanuel.lazega@sciencespo.fr](mailto:emmanuel.lazega@sciencespo.fr)

(E. Lazega), [Avner.Bar-Hen@mi.parisdescartes.fr](mailto:Avner.Bar-Hen@mi.parisdescartes.fr) (A. Bar-Hen),

[pierre.barbillon@agroparistech.fr](mailto:pierre.barbillon@agroparistech.fr) (P. Barbillon), [sophie.donnet@agroparistech.fr](mailto:sophie.donnet@agroparistech.fr) (S. Donnet).

accountable, but also cause segregation and create severe obstacles to cooperation. For organizations and individuals to function, there need to be ways to mitigate these negative consequences, and eventually foster its potentially positive consequences. Relational embedding as such is one pathway for the latter: use of homophily and relationships by members (Lazega and Van Duijn, 1997) can provide this mitigation. But one puzzle remains: in many settings, individuals have to cooperate with competitors, or more specifically, they have to ask and give advice to/from other members whom they perceive to be direct competitors. This is the substantive research gap on which our study focuses, since to our knowledge the literature does not address this issue.

Our main argument is that unlike previous research, which pointed towards various forms of embeddedness, cooperation between competitors requires to think beyond embeddedness (Lazega, 2001), i.e. to think in terms of social processes that rely on existing relational infrastructures (social niches and social status in particular) helping members manage the dilemmas of collective action, i.e. cooperate with competitors. In particular a neo-structural approach defines a social niche analytically as a dense subset of structurally equivalent members of a collective among whom resources of all kinds can be exchanged and accessed at a lower cost than outside the niche. Indeed the individual and system level assumptions as they follow from a neo-structural approach are that members of a social niche share common reflexivity and appropriateness judgments (Lazega, 1992), i.e. identity criteria, cultural rules and status representation of the collective, which allows them to impose upon themselves a form of self-discipline that facilitates system-level social processes such as solidarity (and exclusion), control (and conflict resolution), socialization (and collective learning) and regulation (and institutionalization). These social processes represent social dynamics that are different from embeddedness or from routine solutions to the problem of status competition. They tend to be activated in contexts that are not bureaucratic.

From this perspective, it is useful to clarify the following: relationships between different forms of relational infrastructure (niches and status, for example) are not easy to assess. In particular, niches are a necessary condition to mitigate negative effects of status competition. This should become visible when specific social processes are examined and modeled using network analysis (Lazega, 2001). Here we focus on a relatively well known social process, i.e. collective learning, as measured by advice networks. One implication is that those who engage in advice relations with others not in the same social niche are likely to experience more negative consequences than if they do so within their niche. Without assuming deterministic relationship between niche-membership and advice-seeking, we argue that an indicator of the strength of this kind of management of dilemmas of collective action shows in the fact that individuals will tend to select advisors in their own niche, even if they perceive their advisor to be direct competitors. In this paper, our study measures and models advice relations among direct competitors and shows in what context such complex relationships are likely to emerge: contexts in which social niches include many members with high levels of social status. We do not measure and model the consequences of such advice relationships between direct competitors, but we use the consequences as a crucial assumption to formulate our hypotheses. We test this in our data using an adapted blockmodeling method and back up this claim with findings from previous research.

### 1.1. Collective learning in advice networks

A useful starting point is a sociological theory of “how learning is social”. A micro-sociology of knowledge focuses on how actors elaborate interactively what they can claim to know and what

they perceive to be “appropriate” information (Lazega, 1992) to be taken into account in decision making and orientation of action. In order to be taken into account collectively, knowledge claims must be evaluated as appropriate. This elaboration of appropriateness judgments is not trivial, but it is often tacit. Also it is not exclusively carried out in one person’s head, but interactive. In particular, when faced with uncertainties associated with non-routine tasks, actors can seek advice from others who will help build these appropriateness judgments more explicitly. Learning is thus collective<sup>1</sup> because members of a social setting access tacit knowledge through interactions with advisors who may themselves interact with each other. Advice networks are thus a collective learning mechanism because they help generate a form of shared knowledge. The structure of these networks matters for the ways in which this social mechanism takes place. For example since advice networks are usually centralized, specific members with higher indegrees are likely to set the premises of many decisions in that setting. Their role is thus crucial in the collective learning process.

Seeking advice is a complex interaction. Blau (1955, 1964) theorized advice seeking as a social exchange. The advice seeker obtains appropriate information in exchange for deference and recognition of social status of the advisor. Social exchange is needed – as opposed, for example, to market exchange – because it is not uncommon that the advice seeker comes to reformulate with the adviser the question itself which was being asked initially. The advice seeker is in a situation of uncertainty about the very nature of the demand, the latter often including a request for social approval or legitimization. Social status criteria are thus important when selecting an adviser. In such social exchanges the advice seeker nevertheless exposes himself to opportunistic behavior by the advisor who is sometimes in a position to take advantage of the advice seeker’s weaknesses and resources.

Network analysts have studied advice networks (Agneessens and Wittek, 2012; Barley, 1990; Borgatti and Cross, 2003; Brass, 1984; Cerne et al., 2013; Cross et al., 2001; Hansen, 2002; Kilduff and Tsai, 2003; Krackhardt, 1987, 1990; Lazega and Van Duijn, 1997; McDonald and Westphal, 2003; Rulke and Galaskiewicz, 2000; Tsai, 2002), or sometimes simply discussion networks, as social exchange in Blau’s sense. They confirm that recognition of social status gratifies the advisers and provides them with an incentive to share their knowledge and their experience. But social exchange can also have negative effects for the collective. For example, one consequence of such status competition in advice seeking is that, at least in formally organized contexts, members tend to avoid seeking advice from the colleagues “below” them in the formal hierarchy or in the pecking order regardless of whether or not the colleagues “below” are more competent.

We also know that members use homophily in relationships to mitigate such status constraints and help with access to advisors, upwards and downwards, who are usually inaccessible due to purely strategic considerations (Lazega and Van Duijn, 1997; McPherson et al., 2001). Indeed, empirical research finds that actors use many ways to attenuate the harshness of this status rule. They use several kinds of similarities among themselves to counteract the conflicting effects of status competition. This use of homophily in the choice of advisors allows members to find “shortcuts” in

<sup>1</sup> Terms such as collective learning are used in multiple ways in the social science literature, either at a very general level of abstraction (Brown and Duguid, 2000; Favereau, 1994; Lam, 2000; Wenger, 1998) or in more applied perspectives, for example in work on intra-organizational learning (Argyris and Schön, 1978 and the tradition that they created) and collective learning across organizations in many specialties such as education (for example De Laat and Simons, 2002), regional economics (for example Keeble et al. (1999)) or economic sociology (for example Pina-Stranger and Lazega, 2010). Given the purposes of this paper, we rely on a more neo-structural perspective based on network analysis (Lazega et al., 2004a, 2006).

Download English Version:

<https://daneshyari.com/en/article/7538378>

Download Persian Version:

<https://daneshyari.com/article/7538378>

[Daneshyari.com](https://daneshyari.com)