

Scholarly conformity: Origins, framework, applications and implications

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ABSTRACT

This paper examines the concept of social conformity and provides a theoretical framework to conceptualize and operationalize scholarly conformity, a specific type of social conformity in the process of scholarly communication. It proposes that scholarly conformity can be conceptualized and operationalized by citations (which constitute by the most formal and official way to show "attachment" and "conformity" to authorities and/or popularities). It suggests that one of the most important applications of scholarly conformity is to indicate the evolution of a research community as five phrases of a life cycle. Potentials and limitations of studies in this issue are also provided.

Keywords

Social conformity, scholarly conformity, citation behavior

INTRODUCTION

Conformity, as a cornerstone of human culture, is regarded to accelerate and maintain the spread of behavior within a group (Pesendorfer et al., 2009), as well as closely related to social norms. Previous studies have suggested that conformity is not only embedded in human nature but also a dynamic interaction between individuals and the group as a whole.

Although a lot of theoretical, empirical and experimental researches, particularly in psychology and sociology, have investigated the existence of conformity observations with regard to human society, little work has been done in the field of scholarly communication, in which research communities constitute a highly specialized and professional human society. A possible reason for the lack of such research is the difficulty to identify and measure the existence of conformity behaviors in scholarly

communication: First, even though statistical significance can be identified, it does not mean real life importance (Conroy, 2002). Second, it is perplexed to clarify whether some works are preferred because they are indeed high-quality articles, or because their authors are authorities or popular. Third, it is also complicated to distinguish whether some works become less cited because they are in their normal life cycles, or because new authorities or popularizes emerge.

However, we should not ignore the importance to study scholarly conformity simply because of its complexities. With these concerns, we endeavor to provide a theoretical framework to conceptualize and operationalize scholarly conformity. Based on this framework, two main questions can be answered by further studies: 1) Do conformity behaviors exist in scholarly communication? 2) If so, how can we measure such behaviors and their impacts? Studies of this issue can be beneficial to various areas and parties: For example, factors that trigger citation behavior, impact rewarding/evaluation system, and affect peer review process can be identified, and future applications (e.g. indicator of the evolution of a research community) can be suggested.

ORIGINS: SOCIAL CONFORMITY

Scholarly conformity can be traced back to a cornerstone of human culture -- social conformity, which accelerates and maintains the spread of behavior within a group (Pesendorfer et al., 2009), as well as closely related to social norms.

Generally, social conformity is two-dimensional. On the one hand, conformity is embedded in human nature. It is internal and individual: Man has the instinct capacity to internalize the values of the society, group and community to which he belongs, so as to create sense of belongingness and self-identity. Thus, conformity behavior is conducted not only because man must, but also (and often primarily) because his inner disposition favors such behavior (Coser, 1961). People tend to behave in ways that they believe other people approve of, and avoid those behaviors they think others disapprove of, so as to create sense of belongingness and self-identity for themselves. On the other hand, conformity is external and collective: It can be defined as the act of changing one's behavior due to group

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influence in order to match the responses of others, which results in increased congruence between the individual and the group (Allen, 1965; Cialdini & Goldstein, 2004). Because human behavior is guided by social norms (Cialdini & Trost, 1998; Deutsch & Gerard, 1955; Zimbardo & Leippe, 1991), which will guide humans to conduct adequate behavior to which individuals conform, so as to survive and fit in the society.

Based on previous research, Table 1 shows the categories of conformity behaviors, and Table 2 shows potential variables related to such behaviors.

Conformity behaviors			
By function (Deutsch & Gerard, 1955)	Informational	Form an accurate interpretation of reality and behave correctly	
	Normative	Obtain social approval from others	
By motivation	Unintentional	Inner disposition favors such behavior	
	Intentional (Merton, 1959)	Attitudinal	Individuals grant legitimacy to designated institutional values and norms
		Behavioral	Individuals' acts in accord with values and norms whatever their attitudinal position
		Doctrinal	State institutionalized beliefs to others.

Table 1. Categories of conformity behaviors

Variables	Literatures	Examples
Culture	Bond & Smith, 1996; Cialdini et al., 1999; Kim and Markus, 1999	Collectivist countries were more inclined to conform to the estimates of a group of confederates than were residents of individualistic countries.
Social status	Bickman, 1971; Weiss and Fershtman, 1998	Cumulative advantage process (Price, 1976), Matthew effect (Merton, 1968); preferential attachment (e.g., Barabasi & Albert, 1999; Easley & Kleinberg, 2010)
Demographical background	Berndt, 1979; Coie et al., 1982; Gudjonsson & Sigurdsson, 2003; McDonald et al. 2004	Age, gender

Group structure	Nord, 1969	1) The more observable a member's behavior is, the larger amount of conformity will be. 2) The denser a group is, the greater pressure it will produce, and the more conformity should be supplied.
Esteem	Bernheim, 1994; Cartwright, 2005	If high weight is given to esteem in the utility function, conformity cannot be conducted. If preferences and the importance are given to the authorities, conformity will be achieved and overwhelm esteem.

Table 2. Potential variables related to conformity behaviors.

THEORETICAL FRAMEWORK: SCHOLARLY CONFORMITY IN CITATION BEHAVIOR

As a sophisticated form of human behavior, citing is a complex social and academic phenomenon that can be triggered by various objective and subjective factors and cannot be reduced to linear relationship. For example, Nicolaisen (2007) have reviewed various theories of citation behavior and citation analysis, introducing the widespread beliefs that citing can be regarded as evolutionary accounts of science and scholarship, and can be understood in terms of psychology, the normative theory and the social constructivist theory.

Nevertheless, these complexities should not become the reason to avoid citation analysis as a scientific research. In fact, the process of selecting and dressing a work with references is far from random (Cronin, 1981; Small, 2011): There exists a set of norms—Cronin (2004, p. 43) speaks of “the normative ghost in the machine”—and procedural standards to which scientists typically adhere (e.g., Cronin, 1984; Small, 1976).

We refer such a set of norms to both individual norms and collective norms: The former explains referencing practices as triggered by individual motivations, while the latter suggests that referencing can be learned and formatted in specific groups or domains – i.e. how you cite is dependent on the discipline you belong to (see for example Hellqvist, 2010, *Referencing in the humanities and its implications for citation analysis*).

Thus, scholarly conformity discussed in this poster would be regarded as an individual norm for citation behavior. As a specific type of social conformity happening in the process of scholarly communication, scholarly conformity can be conceptualized and operationalized by citations (which constitute by the most formal and official way to show "attachment" and "conformity" to authorities and/or popularities). Table 3 shows the main conceptual attributes and purposes of scholarly conformity.

Attributes		Purposes	
Informational	Establish a solid research foundation based on previous studies	Accuracy	The effectiveness of research behaviors
Normative	Fulfill social expectations of a certain research community	Affiliation	Accepted by a certain research community.
		Social recognition	Acknowledged by a certain research community.
Intentional	Consciously acts in accord with values and norms of a certain research community	Stability	Maintain the social/community equilibrium, lower down the personal autonomy.

Table 3. Main conceptual attributes and purposes of scholarly conformity.

Therefore, scholarly conformity behaviors can be briefly operationalized as in Figure 1.

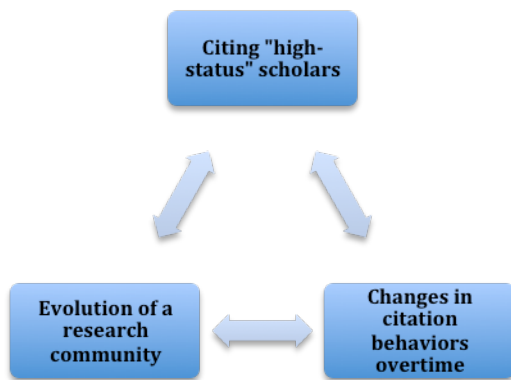


Figure 1. Process of scholarly conformity behaviors

APPLICATION

One of the most important applications of scholarly conformity is to indicate the impact of individual norms in the evolution of a research community as five phrases of a life cycle:

Phrase 1: Emergence - Start citing someone's work

Indicates he/she is gaining higher status and becoming the authority (core) of this research community

Phrase 2: Developing - Increase citing his/her work

Indicates the development/expansion of this community

Phrase 3: Stable - The number of citations of his/her work becomes stable

Indicates this community becomes mature and developed.

Phrase 4: Breaking - The number of citations of his/her work decreases

Indicates changes in this community, and new "authorities"/cores are emerging

Phrase 5: Broken down - No citations (or very few) of his/her work, or totally different citation patterns

Indicates the rise of new authorities (low status to high status) and (perhaps) the emergence of a new research community.

IMPLICATIONS AND FUTURE WORK

Studies on scholarly conformity propose at least two potential hypotheses for further study:

H1: Citations of "high-status" scholars' (authorities') work will follow a pattern of increase-stable-decrease-few.

H2: The specific contexts/tones of their citations will follow a pattern of attract-worship-criticize-ignore in different time period.

In addition, in terms of "high status", further research can focus on two types of status: 1) High status in terms of academic research: highly cited (in the past) researchers/works (citation patterns and changes); 2) High status in terms of social occupation (e.g. The editorial board members): In-group and out-group citation differences.

However, as Cronin (2005) points out, "we are still left with a black-box explanation of citing behavior" (p. 154), future work is needed to solve two main questions, endeavoring to investigate citation behavior in terms of scholarly conformity: 1) How can we investigate the interaction between and different impacts of individual and collective norms in citation behaviors? 2) How can we distinguish scholarly conformity behaviors from the actual quality of the scholarly work, and from its normal life cycle? 3) How can we incorporate citation analysis and content analysis, since number of citations and context of citations are equally important?

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