Chapter 25
A Primer on Q-Method and the Study of Technology

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ABSTRACT

Qualitative methods are under-represented in the articles published by the main journals in Information Systems, which seem to privilege quantitative studies and statistical representativity of results, following the R logic. This chapter provides an in-depth description of Q-method and demonstrates how its use could be beneficial to studies of technology and could reinforce the transparency and validity of other qualitative methods. The focus of this chapter lies in explaining how Q-method works, so that readers are equipped to set up their own Q-studies. It is based on prior literature and ongoing reflections being held by Q-methodologists online.

INTRODUCTION

Q-method has been invented in 1935 by William Stephenson in order to capture individuals' operant and subjective points of view on a given topic, based on the use of concourse theory and a forced distribution matrix. Essentially a qualitative research method, it is often qualified of quali-quantology or mixed method due to the use of a q-factor analysis to examine the data.

Q has been largely overlooked by researchers interested in the study of technology. For instance, in Information Systems (IS) research, i.e. research focusing on digital technology as a socio-technical artefact, only 20 papers can be retrieved (Gauttier et al. 2016; Gauzente, 2013). Yet, Q-studies have been published in major journals in the field (among others: MISQ, I&M, CAIS, JIT, OMEGA), indicating its potential for research related to technology. The fit between Q-method and IS topics has been mentioned several times in the literature (Gauzente, 2013; Thomas and Watson, 2002; Kendall and Kendall, 1993; Dos Santos & Hawk, 1988).

This entry describes Q-method and how it can be applied to IS topics to yield new insights. It provides a description of the current use and potential uses of Q in IS research as well as practical advice on how to set up a Q-study. Areas for future research are outlined. It is targeted towards any researcher

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interested in capturing attitudes to and experiences of technology, as well as those looking for methods to inform the design of technological artefacts and their evaluation.

The reader will notice that the different elements at play during a Q-study are designated as Q-(study, set, factor analysis, etc). The presence of the Q letter could be omitted, and other words could be used. However, the omnipresence of the letter Q in this text is consistent with the vocabulary used by Q-methodologists in publications. It also serves as a reminder to the reader that in this chapter every notion should be interpreted in regard to the Q approach and intentions, and not to the R logic with which the reader might be more familiar. Indeed, in contrast to positivist approaches and the use of R-methods, Q-method considers the self-referent subjective experience of reality (or here technology). It does not aim at a generalizable objective view of a phenomenon, nor does it look at the relationship between variables composing the phenomenon. Q-method identifies the shared perspectives on a given topic between individuals (Watts and Stenner, 2012).

BACKGROUND

Q-method was developed by the psychologist Stephenson (1935; 1953) as an approach to capture people's operant subjective views of phenomena. Subjectivity is conceptualized as what '*emanates from a particular vantage point*' (Brown, 1993). Operancy refers to the fact that these views drive individuals' behaviors. It is a method suited to the identification of the drivers, barriers, and structuring elements of behaviors and experiences.

Q-method rests on two important pillars. One is theoretical and refers to concourse theory, the other is methodological and uses Q-sorting procedure and Q-factorial analysis (Gauzente, 2010). First, the concourse theory posits that meaning is dependent upon context and therefore not given *in abstracto*. The concourse can be defined as the volume of available statements on a topic and is '*the common coinage of societies large and small, and is designed to cover everything from community gossip and public opinion to the esoteric discussions of scientists and philosophers*' (Brown, 1993). Meanings exist for each individual and vary depending on circumstances, but can also be shared with others, thus making interpersonal communication and interpretation possible.

The first step to conduct a Q-study is to generate these meanings. These constitute the Q-sample.

Then these meanings are ranked onto a Q-sort grid, i.e., respondents rank-order assertions according to the degree with which they represent their subjective view of one topic. The forced ranking distribution means that only a small amount of assertions can be selected as highly positively or negatively representative. The majority of meanings will be neutral. This process forces respondents to choose and structure their point of view. The respondents are designated as the P-sample. The result of the Q-sorting process by the participants is a Q-sort. The participants are invited to comment on their Q-sort and reveal how they interpret the elements of the concourse as well as their own subjective point of view as revealed through the process of the study. Then, a factor analysis is performed to process the Q-sorts. Instead of individuals, assertions or statements are analyzed. In other words, the correlation matrix relies not on assertions but on individuals. This procedure is called Q-factor analysis. As a result, one identifies Q-factors, which are designated as view, i.e. shared views amongst participants. The views shouldn't be assimilated to groups of people as in typological approaches. The views are not a statistical representation of groups in the general population. Rather, they are shared operant views and interpretations of a topic.