

Abstract

Mapping the Intersection between Scientific Discourse, Technological Evolution and Social Movements: A Visual Approach.[†]

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The relationship between technology and sociopolitical change has been a major topic in academic discourse concerning political engagement and protest. Despite these two dynamics refer to different societal subsystems their relation has often been described through semi-causal relations as if new media could deterministically foster political engagement and spark protest [1] or, at the opposite if a specific socio-political context could deterministically produce technological innovation. This paper proposes to observe this problematic assumption through the lens on academic discourse about political engagement and protest from a longitudinal perspective covering the last 15 years of academic research. Aided by time-series visualisations [2], this talk draws a sociotechnical timeline of protest and media technologies scholarship to enhance our knowledge about academic research and, at the same time, to understand the perceived connection between media technologies and protest.

The proposed approach defines the academic discourse of technology and protest as composed of three components: a) Social technologies, b) methods and techniques, and c) social phenomena. The specific combination of these three elements, we claim, defines the status of academic discourse in the field. In other words, the academic understanding of social movements in their relationship with media technologies is defined by a set of three selections: a technology deemed to be relevant, a set of methods perceived as appropriate, and a specific case among the various social actions that could possibly be studied. Building upon a systematic literature review of 150 covering the period between 2000 and 2015, this research uses Time-series visualisations as an exploratory tool for observing trends and tendencies. This allows us to observe three major underlying dynamics: a) increasing focus on specific technological platforms rather than the larger media ecology, b) increasing selection of cases of protest based on the relevance of media technologies, and c) increasing use of quantitative digital methods and a decline in theoretical papers and qualitative research. These trends go in hand with a natural focus on 'new' phenomena and have interesting consequences from the representation and understanding of protest movements within the society.

The combination of technologies, methods and cases can be understood as the specific program of the system of science [3,4] for the field of activism and social movement studies. From a social system theory perspective, programs are given conditions for attributing the code value of that specific functional system [5]. Being the code of the system of science the binary opposition truth/false, the emergence of a specific program, defined along the lines we have identified, will have major consequences defining what is a legitimate protest movement to research and, moreover, which findings can be considered scientifically solid [6].

Within this perspective, abandoning theoretically grounded research, development of new theoretical concepts, and in-depth analysis of specific case studies in favour of technologically defined examples can result in scientific knowledge constructed within a short period of time and within specific technological platforms. At the same time, the emergence of new programs within a specific social system allows the continuation of the operations within the system itself when the system must face increased environmental complexity. This seems to be the case in the larger context of social sciences where observations and data are more and more available as large-scale digital data. This results in a radical re-definition of social science research, topics and methods where scientific relevance, scientific discourse and ultimately what counts as social phenomenon is re-defined as the combination of what is observable through available digital data and describable through computational methods. As Heinz Von Foerster once said “*Experience is the cause, the world is the consequence*”.

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