Chapter 16

E-Research Collaboration of International Scope in Social and Political Sciences:
Scale and Complexity Linkage with the Requirement of Physical Encounters

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ABSTRACT

This chapter presents a comparative analysis of three case studies (all from the field of social and political science) on global e-research collaboration, describing how Information and Communication Technologies (ICTs) are facilitating the overcoming of geographical barriers. Previous research points out that physical e-research collaboration meetings play a relevant role. This chapter explores whether this requirement of physical meetings in e-research collaboration is independent of the scale and complexity of the collaboration established. The findings suggest that high complexity can be achieved using communication tools if the scale of the group is small, while very large groups can collaborate using communication tools if their target is a loose collaboration. However, if the collaboration involves both a large group and a considered complexity of collaboration, establishing a balance between communication tools with the requirement of physical meetings becomes a relevant issue.

INTRODUCTION AND BACKGROUND

In 1963, Price noted that since the beginning of the 20th century, a more rapid increase of scientific collaboration has taken place. Over the last decades, several authors have agreed that the adoption of ICTs has provided a strong impetus on growth in collaborative research (Anandarajan & Anandarajan, 2010; Hackett, 2005). However, ICTs not only quantitatively increase research collaboration, but also transform the way collaboration is carried out. Research has always depended on the dominant media matrix (Johns,

Chen, & Hall, 2004) and has changed over time, depending on the communicational capacities of each conjuncture. The adoption of ICTs represents the latest stage in this development and transformation.

The term "collaboration" originates from the Latin word *collaborare*, which means to work together. Hagstrom defined scientific or research collaboration as a group of intellectual peers working together over a period of time to solve a research question (Hagstrom, 1965). Research collaboration can take many forms. Several questions emerge from Hagstrom's characterisation: 1) Who are those peers? (peers from the same institution or diverse institutions; peers from the same discipline or from several disciplines; academic peers only or also collaboration amongst academics and non-academics); 2) How many peers will be involved? (i.e. collaboration amongst two researchers or small- and large-scale groups); 3) How long will they have to work together? 4) How closely will researchers have to work together? (in physical terms or in terms of regular contact); and, 5) Which type of common goal or question do they have or address together in order to constitute collaboration? More importantly, is the adoption of ICTs in research changing research in some of these parameters? Several authors agree that with the advancement of ICTs, scientific collaboration has evolved into new forms of social network and interaction mediated through computers, known as e-research collaboration (Anandarajan & Anandarajan, 2010; Jankowski, 2009; Jirotka, Procter, Rodden, & Bowker, 2006; Ribes & Lee, 2010) or e-science (Hine, 2006).

Apart from the initial theoretical conceptualisation and the prospects of ICTs' potential for research, empirical analysis of cases of e-research collaboration has already been developed (Dutton & Jeffreys, 2010). Initiated in the field of science and technology research, it has more recently expanded to humanities and social and political science research (Anandarajan & Anandarajan, 2010). However, even if empirical research on a specific case has already been developed, little empirical research is based on a comparative analysis of different types of e-research collaborations. Consequently, the following chapter aims to analyse and compare emerging forms of e-research collaboration in the field of social and political science.

Furthermore, the analysis will be developed on a global or international scope, that is, collaboration that involves research in different regions of the world. Edge (1979) and Stokes and Harley (1989) found that most collaborations start informally. In addition, the spread of ICTs' spatial proximity seems to have encouraged collaboration in the past, since it tends to encourage informal communication—communication that is dependent on physical meetings (Hagstrom, 1965). Hence, the following chapter will address the question: How do ICTs facilitate the overcoming of geographical distance barriers and facilitated e-research collaboration of global scope? Since Siemens (2010) highlighted the importance of not being over-reliant on e-research tools, and that a balance between e-research tools and face-to-face meetings is needed in order to strengthen collaboration, this chapter aims more specifically to explore and compare how this balance is established within collaborations that involve diverse scale and complexity.

This chapter will analyse the links to physical encounters of diverse cases of e-research collaboration in terms of scale, specification and complexity of the collaboration. Scale refers to the number of researchers involved in the collaboration. Specification and complexity of the collaboration refer to the level of definition of the common goal (if the common goal is clearly defined around a specific common target *versus* if the collaboration is left open to what emerges from the interaction around common interests) and the level of interaction that is involved (from developing a final outcome together versus sharing a space). Links to physical encounters refers to the frequency and type of physical meetings as part of the collaboration process.

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