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Towards a smart systems view of museum networks

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Abstract

Aim

The domain of cultural heritage management includes the complex of activities planned and implemented with the aim to define more efficient, effective, and sustainable approaches in the management of products, services, and traditions that have a high-value for a specific culture (Stovel, 1998; Cameron & Kenderdine, 2007; Montella, 2010a, 2011; Cerquetti, 2011).

Along the time, different research streams have focused the attention on the opportunity to define new pathways and perspectives in the management of cultural heritage as way to increase its positive effects on the social and economic development of territories (Bessièrè, 1998; Scott, 2004; Hampton, 2005; Cerquetti, 2010).

In such a line, many contributions have been offered with reference to the implementation of more efficient communication strategies (Kalay *et al.*, 2007), to the development of more appealing experiences (Otnes & Maclaran, 2007; Pietroni, 2012), and to the adoption of technology based innovations to increase the attractiveness of cultural heritage (Meyer *et al.*, 2007; Ott & Pozzi, 2011).

Despite the relevance of all these contributions, it is possible to underline the existence of a dominant object-based approach in which the cultural heritage is viewed as a sort of ‘good to sell’ by acting on the traditional marketing levers (Barile *et al.*, 2012; Barile & Saviano, 2014). Conversely, little attention is paid with reference to the opportunities related to a



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radical change in perspective in the way in which the cultural heritage is perceived (Inglehart, 1990; Kreps, 2003; Barile, 2012).

In order to bridge this gap, the paper builds upon the conceptual and interpretative framework offered by the Systems Thinking (Beer, 1979; Espejo, 1990, 1994; Espejo & Reyes, 2011; Barile & Saviano, 2010, 2011; Golinelli, 2010; Barile *et al.*, 2012, 2016) and the Self-Organization Theory (Witt, 1997; Foster & Metcalfe, 2003; Ulrich & Probst, 2012) in order to identify possible approaches that can support the widening of perspective in the management of cultural heritage.

More specifically, by shifting the focus from the management of cultural heritage *items* to the management of cultural heritage *systems*, the paper focuses the attention on the topic of museum networks (Lorenzoni, 1987; Crooke, 2006; Pencarelli & Splendiani, 2011). In such a line, the work investigates the conditions required for the emergence and survival of museum networks in order to highlight the possible contribution of Information and Communication Technologies (ICTs) in defining more performant managerial models by acting on collaboration, information sharing, and communication (Ing, 1999; Lemelin & Bencze, 2004; Marty & Jones, 2008).

To this aim, the work adopts the interpretative lens of the *Viable Systems Approach* (vSA) (Barile, 2009a; Golinelli, 2010; Barile *et al.*, 2014) in order to ‘observe’ museum networks as *viable systems* (Barile, 2009b) in terms of systems able to survive in their contexts by establishing effective relationships with their relevant suprasystems.

Research pathway

By adopting the interpretative contributions offered by the System Thinking, the paper proposes a literature review on the topic of cultural heritage management in order to: 1) define criteria and guidelines for an effective *systems* management of museum networks (Albert *et al.*, 2005; Van Huy, 2006; Cerquetti & Montella, 2015); 2) develop a framework of reference useful to investigate the museum network as a viable system (Barile, 2013; Barile *et al.*, 2014; Saviano & Caputo, 2013); and 3) underline the advantages related to the network configuration in the cultural heritage management (Thorelli, 1986; Lorenzoni, 1992; Latin, 1991; Polese, 2004).

The theoretical reflections herein are verified using a qualitative method approach (Gubrium & Holstein, 1997) based on the analysis of a single case study (Flyvbjerg, 2006): the *Sistema Museale Regionale dell’Umbria*. The empirical observation is direct to investigate what are the elements able to affect the emergence of a viable system from the management of museum network. Moreover, a technology-based view is adopted in order to define possible contributions of ICT in improving network museums’ ability to dynamically adapt themselves to the changes of ‘markets’ through a more efficient, effective, and sustainable approach to the management of variety (Dickover, 1994; Montella, 2010b; de Oliveira & da Silva, 2011; Espejo & Reyes, 2011).



Theoretical and practical implications

The interpretative framework herein supports a better understanding of the variety that affects the interactions among the various actors that are involved in the articulated scenario of cultural heritage (Barile & Saviano, 2012; Golinelli, 2012) and of the opportunities offered by the ICTs in ensuring a smart approach in the management of cultural heritage (Frattasi *et al.*, 2006; Duff *et al.*, 2010).

In the same direction, the paper offers useful indications to decision makers interested in adopting an innovative approach to the management of museum networks able to overcome the limitations of traditional transactional view (Gouthier & Schmid, 2003; Van de Werfhorst & Hofstede, 2007).

Conclusions and future directions for research

In a context like Italy in which the social and economic development of a territory can significantly rely on cultural heritage, the development of adequate managerial approaches for museum is acquiring an increasing relevance. In this direction, the paper highlights the contribution of systems thinking to the management of museum networks by underlining the relevant opportunities offered by a smart approach to ICT in improving collaboration, information sharing, and communication between different cultural heritage units in the building of shared pathways to address the challenges of increasing market variety.

Keywords

Cultural Heritage Management; Museum Networks; Systems Thinking; Smart Technologies; Management of variety.

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