

INVESTIGATING DMOS THROUGH THE LENS OF SOCIAL NETWORK ANALYSIS: THEORETICAL GAPS, METHODOLOGICAL CHALLENGES AND PRACTITIONER PERSPECTIVES

Dean HRISTOV¹

Bournemouth University, Bournemouth, United Kingdom

ABSTRACT

The extant literature on networks in tourism management research has traditionally acknowledged destinations as the primary unit of analysis. This paper takes an alternative perspective and positions Destination Management Organisations (DMOs) at the forefront of today's tourism management research agenda. Whilst providing a relatively structured approach to generating enquiry, network research vis-à-vis Social Network Analysis (SNA) in DMOs is often surrounded by serious impediments. Embedded in the network literature, this conceptual article aims to provide a practitioner perspective on addressing the obstacles to undertaking network studies in DMO organisations. A simple, three-step methodological framework for investigating DMOs as inter-organisational networks of member organisations is proposed in response to complexities in network research. The rationale behind introducing such framework lies in the opportunity to trigger discussions and encourage further academic contributions embedded in both theory and practice. Academic and practitioner contributions are likely to yield insights into the importance of network methodologies applied to DMO organisations.

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INTRODUCTION: DMOs AT THE FOREFRONT OF RESEARCH AGENDA?

The changing post-austerity context on a global level is a wake-up call for destinations and Destination Management Organisations (DMOs) to rethink their existing delivery and growth agendas (OECD, 2014). Within

¹ Address correspondence to Dean HRISTOV, Bournemouth University, 89 Holdenhurst Road, Bournemouth, UNITED KINGDOM. E-mail: dhristov@bournemouth.ac.uk

this context, the revision of the characteristics, scope and functions of destination management bodies requires further attention from both academia and practice (Laesser & Beritelli, 2013). The landscape of destination management is altering (Longjit & Pearce, 2013; Morgan, 2012; Pforr, Pechlaner, Volgger, & Thompson, 2014) and this requires taking a look at the 'steering wheel' of tourism geographies, namely DMOs and their networks of member organisations. This provides an alternative view to the more traditional thinking where destinations have long been placed at the forefront of investigation (Buhalis, 2000; Ritchie & Crouch, 2003), particularly in times when contrasting, yet complementary concepts such as management and leadership are gaining prominence (Hristov & Zehrer, 2015). The past has clearly seen destinations as the unit of analysis and dominating paradigm in tourism management research. The shifting landscape of destination management (Beritelli, Bieger, & Laesser, 2013; Coles, Dinan, & Hutchison, 2012), however, brings into the spotlight the importance of adopting new approaches to the way we see destinations and lead organisations. Being a member of a local DMO often allows for having a voice in destination decision-making (Ness, Aarstad, Haugland, & Grønseth, 2014) - voice that is able to shape the way destinations are managed, developed and positioned on the increasingly competitive and highly-saturated global map.

Examining the discourse of key individuals behind organisations having a stake in destination management is then crucial (Beritelli & Laesser, 2011; Ness *et al.*, 2014) if destinations are to survive in a shifting political and economic operational environment. DMOs can clearly serve as a platform to facilitating such dialogue of strategic importance (Blichfeldt, Hird, & Kvistgaard, 2014; Hristov, 2014). Contemporary DMOs are seen as a symbol of collectivism in destination decision-making (Beritelli, 2011a). An emphasis is thus placed on the increasing importance of diverse networked destination communities involving businesses, government and civil society (Beritelli, Bieger, & Laesser, 2007). It may well then be argued that today's destination management involves network management (Hristov & Zehrer, 2015; Laesser & Beritelli, 2013) and emerging DMO networks are function of joined-up thinking and collective action.

Arguably, enquiring into networks on strategic organisational as opposed to the much broader and blurred spatial i.e. destination level deserves further attention (Del Chiappa & Presenza, 2013; Morgan, 2012; Ness *et al.*, 2014). The direction of discussion in this paper is then drawn on the importance of research *in* destination organisations, rather than

research *on* destination organisations. The potential of Social Network Analysis (SNA) used as an approach to theory-building and improving management practice (Aubke, 2014; Conway, 2014; Pavlovich, 2014) is debated. In order to deal with the messy reality, we have to find a way to simplify our research objects (e.g. DMOs) by seeing these organisations in particular ways. This is how today's DMOs are seen as networks (Ness *et al.*, 2014) through the lens of both – purely theoretical underpinnings (Network theory) and more practitioner-oriented concepts and applied tools (SNA).

Investigating DMOs in contrast to destinations implies a more practitioner-led perspective as research outcomes and outputs may inform strategic thinking in DMO organisations and provide implications to shaping destination development trajectories. Academic contributions involving network analysis in DMOs and considering both – 'thick', conceptual discussions and more practical, numerical approaches are nevertheless scarce due to a number of complexities surrounding this research agenda. Indeed, there is a need for more case evidence on the synergetic nature of these contrasting approaches when undertaking network research (Luthe & Wyss, 2014). The purpose of this paper is then twofold:

- (i) To locate the gap in the network literature on destination management and thus unfold the debate on the raising importance of and barriers to carrying out network research on strategic organisational (DMO), as opposed to spatial (destination) level;
- (ii) To propose a practical, 3-step framework for undertaking network research in DMOs as a response to current complexities surrounding the underpinned approach to generating enquiry.

It is important to note that DMOs differ from country to country and that there is no 'one size fits all' definition accepted by the academia. DMOs have been known under a variety of names, they come in all shapes and sizes and operate across various administrative and spatial levels (Harrill, 2009; Kozak & Baloglu, 2011; Pike, 2004). Contemporary, market-driven DMOs have undergone a shift towards adopting a more commercial, yet inclusive approach to destinations (Kozak & Baloglu, 2011). Forming a destination management consortium, which brings under one roof public sector, private sector, not-for-profit organisations and local communities is imperative (Laesser & Beritelli, 2013; Morgan, 2012). Such definition of a DMO implies a more networked approach to destination management. It is, therefore, the one adopted in this research.

The paper continues by discussing theoretical and practitioner dimensions of the network concept before providing a critical overview of key academic contributions on network research carried out on both spatial (destination) and more strategic organisational (DMO) level in order to locate the gap in the literature. The latter serves as the basis for a short discussion of the challenges of undertaking network research on a more strategic organisational level. The paper continues by proposing a three-step methodological framework, which aims to tackle the introduced complexities of carrying out SNA in DMOs and then debates its suitability to destination management practice. The paper concludes by outlining the importance of undertaking network research on a DMO level which has been largely overlooked by the academia due to the perceived complexities of adopting network approaches to this level of enquiry. This is then followed by key limitations of the paper and a brief agenda for further research.

LITERATURE REVIEW

Theoretical and practitioner dimensions of networks

The literature on networks has grown exponentially in the past decade (Aubke, 2014; Borgatti & Foster, 2003). Equally, the concept of the networked world is becoming increasingly widespread (Kadushin, 2012; Mullins, 2013) and networks are seen as a metaphor for understanding organisations and organisational behaviour (Borgatti & Molina, 2003). Going even further, some academics have argued that networks are potentially turning into dominant organisational structures in the era of globalisation (By, 2005; Cravens & Piercy, 1994; Knowles, Diamantis, & El-Mourhabi, 2001). Network analysis is thus basing its theorising on a fundamental construct - the network (Borgatti & Lopez-Kidwell, 2011). Network theory (Granovetter, 1985; Gulati, 1998; Wasserman & Faust, 1994) and its practitioner tool – Social Network Analysis or SNA (Borgatti, Everett, & Johnson, 2013) can examine the complexity of relationships between entities, such as individuals, groups and organisations that interact in the social space (Wang & Xiang, 2007). There have been various interpretations of network enquiry bringing to light the importance of clarifying where theory (Network theory) ends and methodology (SNA) begins (Becken, Scott, Ritchie, & Campiranon, 2015). If Network theory introduces the theoretical grounds to networks and network analysis, SNA is in place to provide a 'how to', practitioner approach to network investigations in organisations. SNA is essentially network theory in practice. Having a primary focus on network interactions, SNA as a

network investigation tool can help improve organisational design, efficiency and communication (Kadushin, 2012) in addition to introducing wider implications to management and leadership practice in destinations (Hristov & Zehrer, 2015). SNA facilitates the sense making of empirical network data and constructing the reality of network interactions (Borgatti & Molina, 2005).

SNA is also able to provide valuable insights into the flows of information and exchange of developmental resources between lead organisations (Borgatti *et al.*, 2013). Network theory advocates that organisations no longer compete as individual entities, but through relational networks, where value is created through collaboration (Fyall, Garrod, & Wang, 2012). This certainly is the future of the increasingly resource-constrained DMOs. This unlocks opportunities for identifying business rationales and potential financial innovations (Laesser & Beritelli, 2013) in supporting DMOs' strategic agenda i.e. providing value to member organisations, attracting tourism and visitor activity and enabling destinations to flourish. If destinations are to compete globally by cooperating locally (Novelli, Schmitz, & Spencer, 2006), DMOs operating as networks can facilitate this process by bringing to light opportunities such as resource-driven development, distribution of research outputs and knowledge dissemination across networked member organisations and beyond.

Networks: Destinations versus DMOs as the unit of analysis

Examining networks is not a new approach in the domains of destination management and development (Scott, Cooper, & Baggio, 2008). However, the majority of works in the field have rather used the network concept as a metaphor for connectedness as opposed to integrating more precise mathematical measures (Ahmed, 2012; Baggio, 2008). The latter usually involves SNA approaches to network data collection and analysis. In addition, a number of studies have pursued co-operation and knowledge-sharing practices among organisations in destinations through studying the network of actors in a locality, or specific public, private or mixed network clusters within geographic boundaries (Baggio & Cooper, 2008; Beritelli, 2011b; Cooper *et al.*, 2006; Del Chiappa & Presenza, 2013; Krakover & Wang, 2008; Longjit & Pearce, 2013; Pearce, 2014; Yabuta & Scott, 2011; Zach & Racherla, 2011). The extant literature on tourism network research has given considerable attention to conceptualising

destinations as networks (Bregoli & Del Chiappa, 2013; Cooper, Scott, & Baggio, 2009; Pavlovich, 2003; Pechlaner, Volgger, & Herntrei, 2012; Pforr, 2006; Scott *et al.*, 2008; Shih, 2006; Timur & Getz, 2008).

Little or no investigation has, however, been carried out on a strategic organisational level i.e. the complete DMO network of member organisations involved in destination management (Del Chiappa & Presenza, 2013). Contemporary DMOs by definition take on board key interested groups keen on having a voice in shaping the management and development of their destinations, such as businesses, local government and not-for-profits. Recognition of the role of such lead structures in orchestrating the majority of key destination management and development-interested groups (Ness *et al.*, 2014; Volgger & Pechlaner, 2014) across today's predominantly market-driven DMOs (OECD, 2014) has also been somewhat overlooked by academia. It is then not surprising that most network studies to date have been carried out on a loose geographical (destination) as opposed to a more strategic organisational (DMO) basis, despite a handful of sporadic attempts to address DMOs as the unit of analysis (Cooper *et al.*, 2009; Scott *et al.*, 2008). Yet, these contributions either investigate DMOs as part of wider networks or the analysis of DMOs is incomplete i.e. the authors target specific DMO members (by sample) as oppose to conducting full study of a given DMO (by census). Such strategic approach is interested in destination lead practices of DMO networks against the increasingly competitive and turbulent operational context. In other words, SNA carried out on strategic organisational level involves enquiry into the internal DMO network where all members of the organisation define its boundaries. Whilst drawing boundaries is projected to be a relatively straightforward process in researching networks in DMOs, the nature of network data and the ways one deals with it are said to be creating substantial impediments.

Complexities in undertaking SNA studies

This section captures a synthesis of key complexities in undertaking SNA studies in DMO organisations. It covers in a nutshell the emerging from the literature key debates being of particular relevance to applying network approaches in studying DMO organisations. Social networks reflect on three core components – *actors*, which in the case of DMOs are all member organisations, *links* connecting individual network actors, and *flows* capturing transactional content (e.g. knowledge and resource

exchange) within the network (Hanneman & Riddle, 2005). Network research tends to study whole populations (e.g. all individuals belonging to a group, such as organisations) by means of census, rather than by sample (Ahmed, 2012). Collecting network data thus implies that network members are not independent units of analysis (Scott, 1991) but rather embedded in a myriad of social relations. The nature of network methodologies sets them aside from conventional quantitative approaches. Network enquiry makes use of relational (Freeman, 2011; Prell, 2012), in contrast to attribute data. The essential point of interest in network studies is thus the cohesiveness and integrity (Prell, 2012; Scott, 2000) of the inter-organisational DMO network, as opposed to network entities seen as individual units of analysis.

Network studies are carried out by means of survey questionnaires being the dominant network data collection technique (Kadushin, 2012). Network data may also be revealed through a variety of other methods and data sources, such as interviews (Cross, Parker, & Borgatti, 2001), participant observation (L. Freeman, S. Freeman, & Michaelson, 1989), policies and related strategic documentation (Dredge, 2006) to name a few. Each approach is considered to have its strengths and weaknesses (Conway, 2014).

Difficulties in obtaining empirical data (Gerdes & Stringam, 2008) are widely recognised in the literature and network data is not an exception. There is a vast literature exploring the complexities in undertaking network studies, particularly in the context of mainstream management and leadership (Conway, 2014). Arguably, SNA can have far-reaching impacts on organisations and individuals being studied, both negative and positive (Kilduff, Crossland, Tsai, & Krackhardt, 2008). The latter scenario is of particular relevance to cases where data, which validity can be questioned is disseminated, and specific actions are then taken.

Undoubtedly, the central issue related to the overall validity of an investigation in the domain of social networks is the collection, analysis and depiction of network data (Frank, 1971; Marsden, 1990). SNA analysis implies complex data collection procedures that may be challenging to execute, or even lead to incomplete or unreliable data (Scott *et al.*, 2008). Clearly, network analysis is worthless without complete data (Rogers, 1987), which may be the reason why SNA studies investigating the full inter-organisational network of DMO member organisations by means of census are rare (if any). Arguably the key reason for this assumption is

that visualisations and analysis of network structures are particularly sensitive to missing data (Huisman, 2009). This may have negative implications for depicting networks (Borgatti & Molina, 2003) and often provide distortions of the 'full picture'. Such scenario is illustrated on Figure 1, where examples of both complete and incomplete network are given. In light of this, Parker, Cross, and Walsh (2001) contended that while a project may not be able to achieve 100% response, typically at least 80% of the investigated network entities should have been covered. Whilst reasonable results may be achieved with up to a 20% non-response rate among actors of the investigated network (Huisman, 2009), in general terms, outcomes below 100% are likely to miss crucial network data (Conway, 2014). Such complexities occur particularly when influential network actors, such as well-connected local government structures or key hospitality establishments in destinations are omitted from depictions (e.g. actors 10 and 11 on Figure 1).

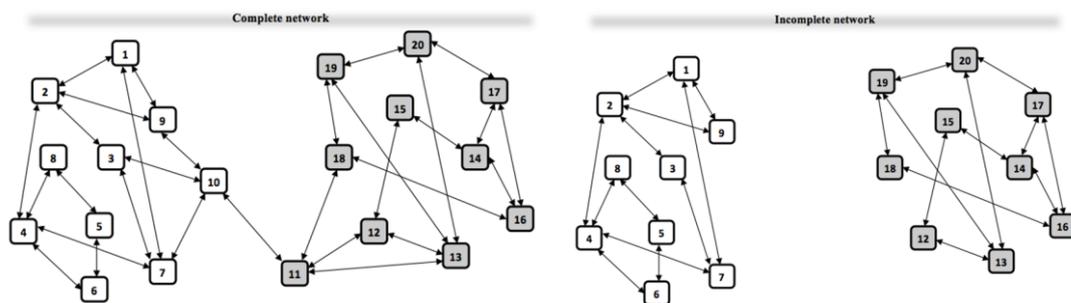


Figure 1. Complete versus incomplete network (Adapted from Conway, 2014)

Further, ethical issues in light of SNA research are rarely raised in the business and management community (Borgatti & Molina, 2005; Conway, 2014) and have only recently drawn considerable attention to research in destinations and destination management. This has been the result of the progressive adoption of SNA approaches by consultants and managers in relation to decision-making and opportunities for structural intervention within organisations (Cross et al., 2001; Parker *et al.*, 2001). It is a common case that investigated network entities may consider some of the questions as sensitive (Tourangeau, Rips, & Rasinki, 2000), as mapping a network ultimately exposes the network status of individuals representing DMO member organisations. Ensuring anonymity of participants in network research is not a straightforward process (Conway, 2014). In general, the most efficient tool for protecting research

subjects being questioned by a survey is to simply guarantee their anonymity (Kadushin, 2005). This is not, however, the case in network research and SNA. Characteristics and functions of featured DMO member organisations *vis-a-vis* actor attributes are prerequisites to facilitating an in-depth exploration of networks. In practice, anonymity in network research cannot be guaranteed as organisations and individuals can be easily identified by the combination of attributes (Borgatti & Molina, 2005). Network analysis is nevertheless truly useful to management practice if it draws on the actual names of actors (Borgatti & Molina, 2005). Yet, considering matters of privacy and ensuring anonymity of participants capture actions and possible consequences that are difficult to be dealt with.

Inaccurate data may also be arising from informant bias. This issue occurs when respondents forget to list some of the network members they have interacted with (Bernard, Killworth, Kronenfeld, & Sailor 1984). Network studies can avoid these issues by ensuring that all DMO member organisations being part of the network are clearly listed in the survey as per membership data provided by the DMO organisation. Whilst individuals are good in recalling strong ties, under-reporting of weak ties is a common issue (L. Freeman, Romney, & S. Freeman, 1987) and a list of network actors arranged by size of the organisation starting from Small and Medium-sized Enterprises (SMEs) through to Medium-sized Businesses (MSBs) and prominent Blue-chips and local government bodies may be used as part of the survey instrument in a response to this common practice.

PROPOSED FRAMEWORK

Having explored the key literature on networks in destinations and destination management, along with the dominant complexities in undertaking such enquiry, this paper proposes a simple, 3-step framework for carrying out SNA research in DMO organisations (*Figure 2*). This framework may well be seen as a promising response to some (if not all) of the above common complexities.

Following the flow and direction of discussion so far, it is clear that the concept of the networked DMO organisation (Ness *et al.*, 2014) and the adoption of SNA approach (Borgatti *et al.*, 2013) to generating strategic organisational enquiry may well be seen as viable approach to addressing current shifts in the way destinations and destination groups are studied.

In the outset of this paper the author argued that a mixed method design that involves three main phases of data collection and analysis with an emphasis on SNA may serve as the basis of researching destination management practice (*Figure 2*). Indeed, industry practitioners and the academia are progressively employing mixed methods in an attempt to derive complementary data (Conti & Doreian, 2010; Edwards & Crossley, 2009). Conway (2014) contended that while quantitative approaches may be particularly useful in revealing the structure of the network, 'thick' data derived from interviews and participant observation (e.g. the Phase I of data collection) is more effective in providing insights into processes, relational content and context of interaction among network actors. Having said that, network studies should be seen as both - pieces of academic enquiry and applied projects attempting to deliver a set of practical outputs.

Drawing on the above discussion on both - mainstream and destination management network literature, this paper puts forward a number of Research Questions (RQs) that may be handled with the proposed methodological framework. Such RQs aim to:

RQ1: Define the political and economic dimensions of DMOs' operational environment triggering change in these organisations;

RQ2: Uncover initial processes of organisational transformation in DMOs fuelled by shifts in the operational environment;

RQ3: Investigate the effects of turbulence in the operational environment over DMOs' network behaviour & development of leadership capacity;

RQ4: Explore how cohesive are networks to allow distribution of knowledge and communication flows across to all DMO member organisations; how strategic resources are handled across financially-constrained DMO networks;

RQ5: Locate roles and functions of DMO member organisations, and equally - identify core and peripheral DMO members to improve organisational design and facilitate wider collaboration within the network;

RQ6: Construct a set of practical outputs (tools) having implications for management and leadership practice in contemporary DMOs.

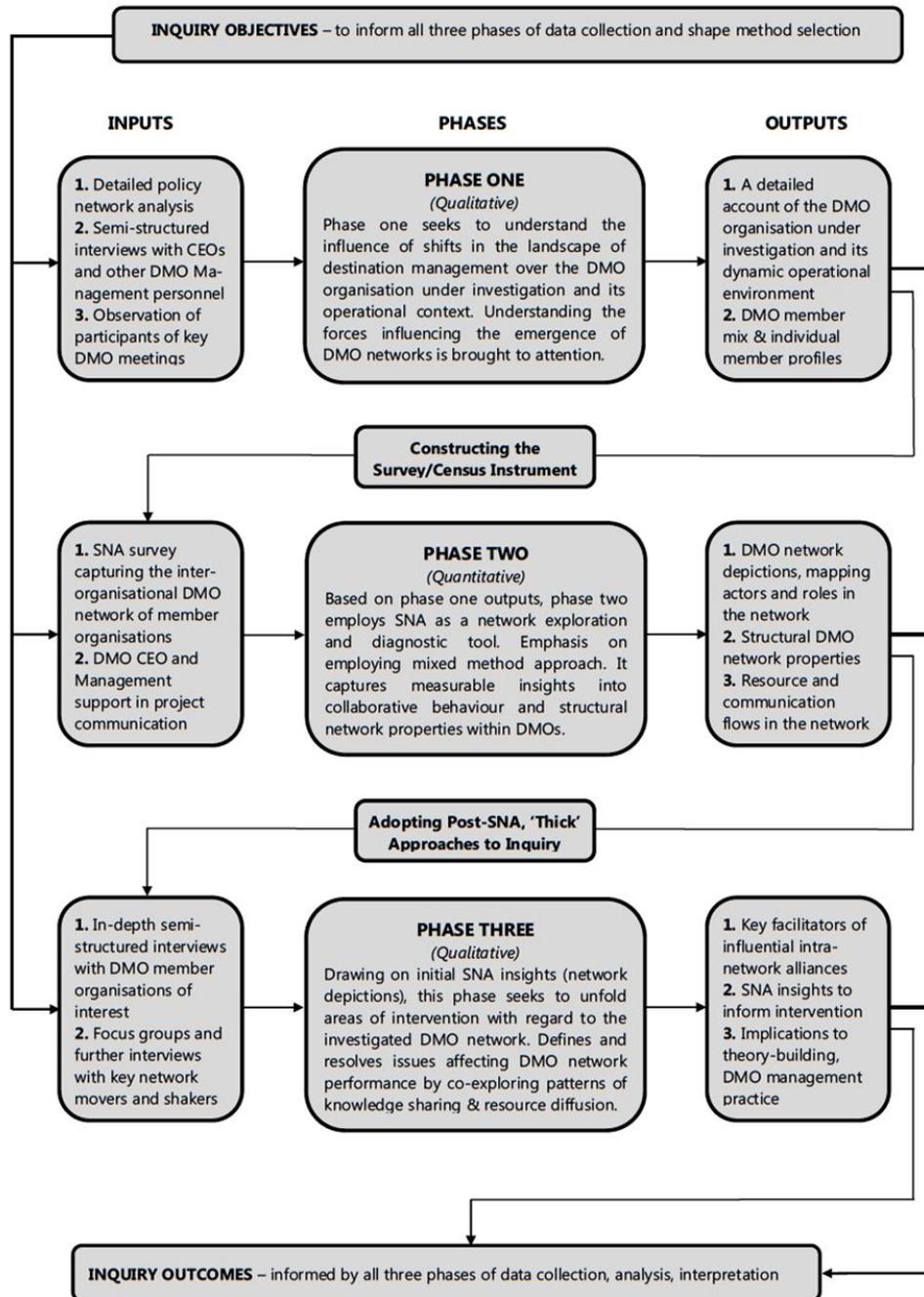


Figure 2. *Proposed methodological framework*

Preliminary enquiry (Phase I)

Phase I of the proposed framework involves a preliminary qualitative study having the task to examine the changing operational environment, in addition to identifying the DMO member mix and initial processes of transformation of the unit of analysis. This qualitative study may be

completed in three sub-phases involving policy network analysis (Dredge, 2006), participant observation (Conway, 2014) and semi-structured interviews (Flick, 2009) with executives and other senior management personnel of key DMO organisations in focus. The policy network analysis has the task to uncover the changing landscape of and emerging policy networks in delivering destination management. Further, participant observations of DMO group meetings, along with marketing and management steering group discussions can provide insights into the strategic direction of the network and the extent to which individual DMO members are willing to adopt a collective approach to destination management. Semi-structured interviews can enquire into the unit of analysis (DMO) and the general structure and characteristics of the investigated destination management network, such as sector-type organisations involved. Establishing rules of inclusion is a straightforward process when studying networks in DMOs. In SNA enquiry carried out on an organisational (e.g. DMO) level, boundaries are defined by all members of that organisation i.e. non-DMO members are considered to be outside the investigated network and thus omitted from the investigation. In contrast, specifying network boundaries (Laumann, 1989) or whom to consider as part of the network is often problematic, when destinations are the key unit of analysis. Shifting DMO priorities may also be in focus under Phase I and this can be evidenced by involving a retrospective account of the investigated network of inter-organisational relationships.

SNA enquiry (Phase II)

Phase II is focused on constructing the DMO network (involving network depictions) through SNA and applying survey methods to the population - the census (Ahmed, 2012; Borgatti *et al.*, 2013) of individuals representing member organisations. The DMO itself is a network of local government bodies, hospitality and other businesses and third sector organisations. Adopting an SNA approach makes visible the links and patterns of interactional and transactional content shared within and across strategically important networks (Cross, Parker, & Borgatti, 2002). In essence, this is the purpose of Phase II where individuals representing DMO member organisations are seen as vital to constructing the landscape of network alliances. Further series of SNA are recommended to be carried out on the network data to measure relational characteristics. The latter involves analysis of network enquiry outputs, such as network centrality, density, and heterogeneity amongst others, in addition to

revealing transactional content patterns (e.g. exchange of resources among DMO network members). Unveiled network characteristics assist in locating the role and functions of different actors in the complete DMO network.

Undertaking an SNA in organisations is a challenging task (Conway, 2014) and DMOs are not an exception. Adopting a set of practical approaches to network data collection under Phase II can support overcoming key complexities and this paper provides a snapshot of such practices. Considering data dissemination with DMO management and individual member organisations, adopting key messages to communicate the significance of research to respondents, using appropriate communication channels, along with employing a simple and straightforward questionnaire content and design which are explained below, are all prerequisites to successfully completing Phase II.

A Quid Pro Quo (Borgatti & Molina, 2005) or data dissemination shares the view that once data is processed and analysed, the researcher will feed the analysis back to DMO management and individual member organisations in return for being allowed to collect network data. DMO network studies should strive to fulfil both – purely academic and more specific management practice objectives and this approach to data collection, treatment and dissemination facilitates such process.

Adopting key messages is another crucial step to completing successful SNA projects being closely linked to dissemination of messages unveiling the importance of participation. Prospects should be aware of the benefits of contributing to network projects reflecting on both – an academic piece of work and a project that would normally have practical implications (Kadushin, 2005). Surveys involving DMO member organisations can be tailored to make clear that participation in SNA will support the whole network as undertaking an SNA study is likely to improve the operational effectiveness, in addition to knowledge and resource exchange of the DMO, which in turn has implications on enhancing destination promotion and positioning, development and long-term, sustainable planning.

Using appropriate communication channels is yet another key important factor in boosting DMO member participation which can be addressed in two directions – using the official DMO communication platform (if one exists) and personal one-to-one communication. The official DMO communication platform (e.g. newsletter, intranet) for

disseminating pertinent information and updates to member organisations may be used for distributing survey questionnaires and informed consent forms (Borgatti & Molina, 2003). This is often subject to prior approval by the Chief Executive Officer (CEO) of any DMO network. A less-effective approach involves personal correspondence with individual network organisations or the so-called 'Plan B' emphasising on the significance and thus outlining the benefits of taking part in the project, however, without the back up of DMO Management. The latter is nevertheless often a key factor in boosting participation levels.

At last, *questionnaire content and design* implies a survey questionnaire that is carefully tailored to reduce the time required for completion whilst also following a straightforward approach to content and question structure (Conway, 2014). Matters of questionnaire design are indeed fundamental to network data completeness (Kossinets, 2006). DMO member organisations are time-constrained and may not have been involved in SNA investigations before. Brief instructions on the particularities of taking part in network studies should then be addressed by those tasked with conducting network research. Providing clear and concise, yet informative questionnaire introduction is critical to success. Such introduction should also touch upon the specific nature of relational data and the involved ethical considerations, namely the lack of anonymity and network exposure of participating DMO member organisations. Researchers should be explicit that network studies in DMOs are solely interested in studying interactions within the network of member organisations as opposed to revealing personal business networks of individual DMO members i.e. going beyond DMO member networks. Nevertheless, it is important that the informed consent of participants is clearly captured in the survey introduction before proceeding to network questions. The inclusion of an agreement tick-box is just one example of how researchers can ensure that network participants are fully aware of how network data is to be treated and disseminated.

Post-SNA enquiry (Phase III)

Network visualisations play a substantial role in fuelling the process of theory building - new insights into investigated matters can emerge through manipulating and further examining network depictions (Conway & Steward, 1998; Moody, McFarland, & Bender-deMoll, 2005).

Drawing on SNA outputs involving network depictions and measurable network and actor properties, Phase III seeks to unfold potential areas of intervention with regard to investigated DMO networks and explore the key facilitators of effective and efficient collaboration. Series of in-depth interviews may pursue expert interpretation of network data obtained through Phase II where salient points linked to characteristics of the network and patterns of communication and resource exchange often require further exploration. Indeed, as contended by Biddex and Park (2008), network depictions may well be used as part of the data collection process as a way of interacting with respondents to confirm key Phase II outputs, or inform consultants and practitioners for potential interventions. In other words, if Phase II unveils further questions on DMO networks, those are usually handled under Phase III using industry experts and DMO members' input. Hence, the focus is on examining the behaviour of network actors, along with interpreting Phase II-identified structural properties of the DMO network. This phase is further tasked with defining and resolving issues affecting network performance (Borgatti & Molina, 2005) and ultimately - improving destination management practice through examining patterns of knowledge sharing and resource exchange. This can be done by further SNA analysis with focus on strategic cliques, powerful dyads and triads in the network, and in-depth interviews with their leads. The final goal of Phase III is to provide implications to theory-building linked to improving management practice and other core functions in DMOs operating within a challenging political and economic context (see the proposed RQs).

CONCLUSION

This paper provided a discussion on studying networks in tourism management research, where the latter has traditionally acknowledged destinations as the primary unit of analysis. By taking an alternative perspective, the above discussion argued that DMOs may well be positioned at the forefront of today's destination research agenda. They act as destination custodians and equally – shape directions of development for both – their network members and destinations. A practical methodological framework involving a blend of qualitative and quantitative approaches to studying networks in DMOs in their entirety was then proposed. The framework recognised that often competing qualitative and quantitative methodologies are, in fact, complementary when applied to network enquiry in DMO organisations.

Organisations tend to be more network-centric than ever where the destination management domain is just one of many examples. There is an apparent need for more network studies exploring processes of destination management, leadership and development on a strategic organisational level (Hristov & Zehrer, 2015). The latter was clearly pointed out by the review of key network literature in destination management. Network analysis has traditionally been seen as producing rather descriptive data (Scott, 2000; Prell, 2012) and one relatively unexplored way of adding value and deeper insights into the network analysis is through examining relational content of links among network actors, such as diffusion of ideas, knowledge and resources across the network.

The proposed framework has acknowledged the fundamental role of distributing value across DMO networks. Information, knowledge and resource transactions are central to contemporary DMOs in delivering effective and efficient destination management, development and planning in light of today's turbulent and resource-constrained operational environment. By following a clear sequence in employing mixed methods, researchers can provide the 'full picture' of interactions in investigated DMO networks, yet deliver rich account of their contexts and deeper insights into the discourse of destination leads, whilst also supporting relational data integrity and value. Indeed, such framework may be better able to capture a more-accurate interpretation of the network of interactions in DMOs, their directions and value for involved actors and equally - contribute to improving network design and collaborative practices.

Arguably the challenges of undertaking network enquiry in DMOs yet outweigh the enthusiasm of academia to contribute to the existing knowledge. Embedded in the network literature, the key purpose of the above discussion was to trigger interest and as such, it calls for further discussions on adopting network methodologies in destination management research. The shifting focus from destination marketing towards strategic management and leadership in destinations (Zehrer, Raich, Siller, & Tschiderer, 2014) involving investigations into lead organisations will inevitably push this research agenda forward and this is likely to happen in the not-too-distant future.

LIMITATIONS AND AGENDA FOR FURTHER RESEARCH

Networks are seen as the new organisational paradigm (Burnes, 2004; By, 2005) and as such, they deserve further attention in conceptualising DMOs, as well as their application as a sound research method in DMOs, particularly in times when destinations and their lead organisations strive to provide value to tourists and visitors within a progressively competitive, yet largely resource-constrained operational context. Contrasting methodological perspectives are likely to have synergetic effect, if applied as a whole in DMO network research. Involving qualitative and quantitative investigation in complementary fashion is integral to studying networks in DMOs. Hence there is a need for examining such direction of research in detail and ultimately - building upon the existing evidence of applications in practice (if any).

It is important to note that studying DMOs and their membership networks do not necessarily capture whole destinations, which may well be considered as a limitation in this paper. Yet, on the other side of the spectrum, where one takes the traditional i.e. destination approach to studying networks, undertaking a full destination study is less likely to be achieved as destination boundaries are often blurred. The approach taken in this paper focuses on population within clearly defined boundaries i.e. the DMO and its network of member organisations, which is likely to yield more accurate network data. Further, this paper provides initial directions into dealing with the complexities surrounding network research in DMOs through positioning a brief methodological framework and as such, it does not provide all the answers to the questions raised above. It rather aims to trigger a discussion on the importance of taking network methodologies in destination management research forward so that the underpinned approach to enquiry is utilised to its full potential. Despite providing some practitioner perspectives, this review is largely rooted in the network literature. Hence evidence where the proposed framework is put into destination management practice and explored across diverse political and economic contexts is a fundamental avenue for further research.

REFERENCES

- Ahmed, E. (2012). Network Analysis. In L. Dwyer, A. Gill and N. Seetaram (Eds.), *Handbook of Research Methods in Tourism: Quantitative and Qualitative Approaches* (pp. 472-491). Cheltenham: Edward Elgar.

- Aubke, F. (2014). Applying a Network-Lens to Hospitality Business Research: A New Research Agenda. *Advances in Hospitality and Tourism Research*, 2(2), 1-23.
- Baggio, R. (2008). Symptoms of Complexity in a Tourism System. *Tourism Analysis*, 13, 1-20.
- Baggio, R., & Cooper, C. (2008). Knowledge Management and Transfer in Tourism: An Italian Case. *Proceedings of the IASK Advances in Tourism Research 2008 (ATR2008), Aveiro, Portugal, 26-28 May*, 44-53.
- Becken, S., Scott, N., Ritchie, B. W., & Campiranon, K. (2015). The development of new tourism networks to respond to and recover from the 2011 Christchurch earthquake. In B. W. Ritchie, & K. Campiranon (Eds.), *Tourism crisis and disaster management in the Asia-Pacific* (pp. 190-205). Wallingford: CAB International.
- Beritelli, P. (2011a). Do actors really agree on strategic issues? - Applying consensus analysis of stakeholder perceptions in tourist destination communities. *Tourism Analysis*, 16(4), 219-241.
- Beritelli, P. (2011b). Cooperation among Prominent Actors in a Tourist Destination. *Annals of Tourism Research*, 38(2), 607-629.
- Beritelli, P., & Laesser, C. (2011). Power Dimensions and Influence Reputation in Tourist Destinations: Empirical Evidence from a Network of Actors and Stakeholders. *Tourism Management*, 32, 1299-1309.
- Beritelli, P., Bieger, T., & Laesser, C. (2007). Destination governance: using corporate governance theories as a foundation for effective destination management. *Journal of Travel Research*, 46, 96-107.
- Beritelli, P., Bieger, T., & Laesser, C. (2013). The New Frontiers of Destination Management: Applying Variable Geometry as a Function-Based Approach. *Journal of Travel Research*, first published on October 10, 2013.
- Bernard, H., Killworth, P., Kronenfeld, D., & Sailor, L. (1984). The problem of informant accuracy: The validity of retrospective data. *Annual Review of Anthropology*, 13, 495-517.
- Bidder, P., & Park, W. (2008). Online networks of student protest: The case of the living wage campaign. *New Media and Society*, 10, 871-891.
- Blichfeldt, B. S., Hird, J., & Kvistgaard, P. (2014). Destination Leadership and the Issue of Power. *Tourism Review*, 69(1), 74-86.
- Borgatti, S.P., Everett, M.G., & Johnson, J.C. (2013). *Analysing Social Networks*. UK: Sage Publications.
- Borgatti, S.P., & Foster, P. (2003). The network paradigm in organizational research: A review and typology. *Journal of Management*, 29(6), 991-1013.
- Borgatti, S. P., & Lopez-Kidwell, V. (2011). Network Theory. In J. Scott, & P. Carrington (Eds.), *The SAGE Handbook of Social Network Analysis*. Thousand Oaks, CA: SAGE Publications.
- Borgatti, S. P., & Molina, L. J. (2003). Ethical and strategic issues in organizational social network analysis. *Journal of Applied Behavioural Science*, 39, 337-349.
- Borgatti, S.P., & Molina, J.L. (2005). Toward ethical guidelines for network research in organisations. *Social Networks*, 27(2), 107-117.
- Bregoli, I., & Del Chiappa, G. (2013). Coordinating relationships among destination stakeholders: Evidence from Edinburgh (UK). *Tourism Analysis*, 18(2), 145-155.
- Buhalis, D. (2000). Marketing the competitive destination of the future. *Tourism management*, 21(1), 97-116.
- Burnes B. (2004). *Managing Change: A Strategic Approach to Organisational Dynamics* (4th ed.). Prentice Hall: Harlow.

- By, R. T. (2005). Organisational change management: A critical review. *Journal of Change Management*, 5(4), 369–380.
- Coles, T., Dinan, C., & Hutchison, F. (2012). May we live in less interesting times? Changing public sector support for tourism in England during the sovereign debt crisis. *Journal of Destination Marketing & Management*, 1(1), 4-7.
- Conti, N., & Doreian, P. (2010). Social network engineering and race in a police academy: A longitudinal analysis. *Social Networks*, 32, 30–43.
- Conway, S. P. (2014). A Cautionary Note on Data Inputs and Visual Outputs in Social Network Analysis. *British Journal of Management*, 25(1), 102-117.
- Conway, S., & Steward, F. (1998). Mapping innovation networks. *International Journal of Innovation Management*, 2, 223–254.
- Cooper, C., Scott, N., March, R., Wilkinson, I., Pforr, C., & Thompson, G. (2006). *The Network Structure of Tourism Operators in Three Regions of Australia*. Australia: CRC for Sustainable Tourism Pty Ltd.
- Cooper, C., Scott, N., & Baggio, R. (2009). Network position and perceptions of destination stakeholder importance. *Network*, 20(1), 33-45.
- Cravens, D.W., & Piercy, N. E. (1994). Relationship Marketing and Collaborative Networks in Service Organization. *International Journal of Service Industry Management*, 5(5), 39-53.
- Cross, R., Parker, A., & Borgatti, S.P. (2002). Making Invisible Work Visible: Using Social Network Analysis to Support Strategic Collaboration. *California Management Review*, 44(2), 25-46.
- Cross, R., Parker, A., Prusak, L. & Borgatti, S. (2001). Knowing what we know: supporting knowledge creation and sharing in social networks. *Organizational Dynamics*, 30, 100–120.
- Del Chiappa, G., & Presenza, A. (2013). The use of network analysis to assess relationships among stakeholders within a tourism destination: An Empirical Investigation on Costa Smeralda-Gallura, Italy. *Tourism Analysis*, 18(1), 1-13.
- Dredge, D. (2006). Networks, conflict and collaborative communities. *Journal of Sustainable Tourism*, 14(6), 562–81.
- Edwards, G., & Crossley, N. (2009). Measures and meanings: Exploring the ego-net of Helen Kirkpatrick Watts, militant suffragette. *Methodological Innovations On-Line*, 4, 37–61.
- Flick, U. (2009). *An Introduction to Qualitative Research* (4th ed.). London: Sage Publications.
- Frank, O. (1971). *Statistical Inference in Graphs*. Stockholm: Försvarets Forskningsanstalt (Research Institute of National Defence).
- Freeman, L. (2011). The Development of Social Network Analysis—with an Emphasis on Recent Events. In J. Scott & P. Carrington (Eds.), *The SAGE Handbook of Social Network Analysis* (pp. 26-39). Thousand Oaks, CA: SAGE Publications.
- Freeman, L., Freeman, S., & Michaelson A. (1989). How humans see social groups: A test of the Sailer–Gaulin models. *Journal of Quantitative Anthropology*, 1, 229–238.
- Freeman, L., Romney, A., & Freeman, S. (1987). Cognitive structures and informant accuracy. *American Anthropologist*, 89, 310–325.
- Fyall, A., Garrod, B., & Wang, Y. (2012). Destination Collaboration: A Critical Review of Theoretical Approaches to a Multi-dimensional Phenomenon. *Journal of Destination Marketing & Management*, 1(2), 10-26.
- Gerdes, J., & Stringam, B. B. (2008). Addressing Researchers' Quest for Hospitality Data: Mechanism for Collecting Data from Web Resources. *Tourism Analysis*, 13, 309-315.

- Gergen, K. J. (1999). *An Invitation to Social Construction*. London: Sage.
- Granovetter, M. S. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91, 481–510.
- Gulati, R. (1998). Alliances and Networks. *Strategic Management Journal*, 19, 293-317.
- Hanneman, R. A., & Riddle, M. (2005). *Introduction to social network methods*. Riverside, CA: University of California.
- Harrill, R. (2009). Destination Management: New Challenges, New Needs. In T. Jamal & M. Robinson (Eds.). *The SAGE Handbook of Tourism Studies* (pp. 448-464). London: SAGE.
- Hristov, D., & Zehrer, A. (2015) The Destination Paradigm Continuum Revisited: DMOs Serving as Leadership Networks. *Tourism Review*, 70(2), 116-131.
- Hristov, D. (2014). Co-Creating Destination Development in the Post-Austerity Era: Destination Management Organisations and Local Enterprise Partnerships. *Journal of Tourism & Development*, 21-22(3), 25-34.
- Huisman, M. (2009). Imputation of missing network data: Some simple procedures. *Journal of Social Structure*, 10, 1–29.
- Kadushin, C. (2012). *Understanding Social Networks: Theories, Concepts, and Findings*. Oxford: Oxford University Press.
- Kadushin, C. (2005). Who benefits from network analysis: ethics of social network research. *Social Networks*, 27, 139–153.
- Kilduff, M., Crossland, C., Tsai, W. & Krackhardt, D. (2008). Organizational network perceptions versus reality: A small world after all? *Organizational Behaviour and Human Decision Processes*, 107, 15–28.
- Knowles, T., Diamantis, D., & El-Mourhabi, J. B. (2001). *The Globalisation of Tourism and Hospitality*. London: Continuum.
- Kossinets, G. (2006). Effects of missing data in social network. *Social Networks*, 28, 247–268.
- Kozak, M., & Baloglu, S. (2011). *Managing and marketing tourism destinations: Strategies to gain a competitive edge*. London: Routledge.
- Krakover, S., & Wang, Y. (2008). Spatial Dimensions of the Orlando Destination Region. *Tourism Analysis*, 13, 245-258.
- Laesser, C., & Beritelli, P. (2013). St. Gallen Consensus on destination management. *Journal of Destination Marketing & Management*, 2(1), 46-49.
- Laumann, E. O. (1989). The Boundary Specification Problem in Network Analysis. In L. C. Freeman, D. R. White & A. K. Romney (Eds.). *Research Methods in Social Network Analysis* (pp. 61-79). New Brunswick: Transaction Books.
- Longjit, C., & Pearce, D. G. (2013). Managing a mature coastal destination: Pattaya, Thailand. *Journal of Destination Marketing & Management*, 2(3), 165-175.
- Luthe, T., & Wyss, R. (2014). Assessing and Planning Resilience in Tourism. *Tourism Management*, 44, 161-163.
- Marsden, P.V. (1990). Network Data and Measurement. *Annual Review of Sociology*, 16, 435–63.
- Moody, J., McFarland, D., & Bender-deMoll, S. (2005). Dynamic network visualization. *American Journal of Sociology*, 110, 1206–1241.
- Morgan, N. (2012). Time for ‘mindful’ destination management and marketing. *Journal of Destination Marketing and Management*, 1(1-2), 8-9.
- Mullins, L. J. (2013). *Management and Organisational Behaviour* (10th ed.). Harlow: Pearson Education.

- Ness, H., Aarstad, J., Haugland, S. A., & Grønseth, B. O. (2014). Destination Development: The Role of Inter-destination Bridge Ties. *Journal of Travel Research*, 53(2), 183-195.
- Novelli, M., Schmitz, B., & Spencer, T. (2006). Networks, clusters and innovation in tourism: A UK experience. *Tourism Management*, 27(6), 1141-52.
- OECD (2014). *OECD Tourism Trends and Policies*. Paris: OECD Publishing.
- Parker, A., Cross, R., & Walsh, D. (2001). Improving collaboration with social network analysis. *Knowledge Management Review*, 4, 24-29.
- Pavlovich, K. (2003). The evolution and transformation of a tourism destination network: The Waitomo Caves, New Zealand. *Tourism Management*, 24(2), 203-216.
- Pavlovich, K. (2014). A Rhizomic Approach to Tourism Destination Evolution and Transformation. *Tourism Management*, 41, 1-8.
- Pearce, D. (2014). Toward an Integrative Conceptual Framework of Destinations. *Journal of Travel Research*, 53(2), 141-153.
- Pechlaner, H., Volgger, M., & Herntrei, M. (2012). Destination management organizations as interface between destination governance and corporate governance. *Anatolia: An International Journal of Tourism & Hospitality Research*, 23(2), 151-168.
- Pfarr, C. (2006). Tourism policy in the making: An Australian network study. *Annals of Tourism Research*, 33(1), 87-108.
- Pfarr, C., Pechlaner, H., Volgger, M., & Thompson, G. (2014) Overcoming the Limits to Change and Adapting to Future Challenges: Governing the Transformation of Destination Networks in Western Australia. *Journal of Travel Research*, 53(6), 760-777.
- Pike, S. (2004) *Destination Marketing Organisations*. Oxford: Elsevier
- Prell, C. (2012). *Social Network Analysis: History, Theory and Methodology*. London: SAGE.
- Ritchie, J. R. B., & Crouch, G. I. (2003). *The Competitive Destination: A Sustainable Tourism Perspective*. Wallingford: CABI Publishing.
- Rogers, E. (1987). Progress, problems and prospects for network research. *Social Networks*, 9, 285-310.
- Scott, J. (1991). *Social Network Analysis: A Handbook*. London: Sage.
- Scott, J. (2000). *Social Network Analysis: A Handbook*. (2nd ed.). London: Sage.
- Scott, N., Cooper, C., & Baggio, R. (2008). Destination networks: Four Australian cases. *Annals of Tourism Research*, 35, 169-188.
- Shih, H. Y. (2006). Network Characteristics of Drive Tourism Destinations: An Application of Network Analysis in Tourism. *Tourism Management*, 27, 1029-1039.
- Timur, S., & Getz, D. (2008). A network perspective on managing stakeholders for sustainable urban tourism. *International Journal of Contemporary Hospitality Management*, 20(4), 445-461.
- Tourangeau, R., Rips, L., & Rasinki, K. (2000). *The Psychology of Survey Response*. Cambridge: Cambridge University Press.
- Volgger, M., & Pechlaner, H. (2014). Requirements for Destination Management Organisations in Destination Governance: Understanding DMO Success. *Tourism Management*, 41, 64-75.
- Wang, Y., & Xiang, Z. (2007). Toward a Theoretical Framework of Collaborative Destination Marketing. *Journal of Travel Research*, 46, 75-85.
- Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge: Cambridge University Press
- Yabuta, M., & Scott, N. (2011). Dynamic properties of a tourism destination network. *Tourism Analysis*, 16(4), 493-498.

- Zach, F., & Racherla, P. (2011). Assessing the Value of Collaborations in Tourism Networks: A Case Study of Elkhart County, Indiana. *Journal of Travel & Tourism Marketing*, 28(1), 97-110.
- Zehrer, A., Raich, F., Siller, H., & Tschiederer, F. (2014). Leadership Networks in Destinations. *Tourism Review*, 69(1), 59-73.