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Conceptualising networks in sustainable tourism development

Thi Quynh Trang Nguyen^{a,*}, Tamara Young^a, Patricia Johnson^a, Stephen Wearing^{a,b}

^a Newcastle Business School, Faculty of Business and Law, The University of Newcastle, 409 Hunter Street, Newcastle, NSW 2300, Australia

^b Honorary Management Discipline Group, UTS Business School, University of Technology, Sydney, Australia

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ABSTRACT

This paper contributes to the sustainable tourism research agenda concerning the implementation of UN Sustainable Development Goals (SDGs) at a destination level. This paper develops a conceptual framework integrating three theories: stakeholder theory, social network analysis (SNA), and actor-network theory (ANT). Integration reveals a blended approach to enable a reassessment of stakeholder roles to further explore the nature, dynamics and operations of tourism networks as they work to achieve SDGs. Tourismscapes, as a model, is invoked to scaffold data and to provide insight into the nuances of destination networks. This research evaluates this concept and its potential for rethinking tourism research and inspiring a new wave of study. Firmly planted in critical tourism studies, this paper conceptualises tourism stakeholder interactions, specifically those networks pursuing common goals at a destination level, such as SDG 17 that aims to strengthen means of implementation through partnerships.

1. Introduction

In 2015, the United Nations launched seventeen Sustainable Development Goals (SDGs) providing a new system of indicators for sustainable development for application by all industry sectors in all nations (UN, 2015). The tourism industry is directly and indirectly included and materially contributes to their implementation (UNWTO, 2016). Sustainability principles and indicators have long been central to a tourism research agenda, with theoretical issues relating to sustainable development a key focus (Bramwell, Higham, Lane, & Miller, 2017; Ruhanen, Weiler, Moyle, & McLennan, 2015). Tourism has significant effects on economies, environments, societies and cultures around the globe (Pan et al., 2018; Wearing, Stevenson, & Young, 2010), and can “be a factor for environmental preservation, promotion and cultural appreciation and understanding among peoples” (UNWTO, 2016, p.11). Accordingly, the UNWTO (2016) indicated a need to implement a framework to achieve these goals. Such a framework could assist understandings of the nuanced relationships between destination stakeholders (UNWTO, 2016). In critiquing theoretical approaches used in tourism research to further knowledge about destinations and stakeholders within them, this conceptual paper seeks to address Lane's (2018, p. 163) question “will sustainable tourism research help sustainable tourism towards real life implementation?”. The discussion that follows concerns the design of a methodological approach to

research the processes of operationalising Goal 17, a key SDG which referring to the importance of networking interactions between partners to implement SDGs.

The stakeholder approach is fundamental to tourism research, yet researchers have struggled to explain the often complex relationship between stakeholders (Beritelli, 2011; Merinero-Rodríguez & Pulido-Fernández, 2016). According to a number of scholars, network analysis provides one approach to understanding stakeholder interactions and relationships in tourism destination management, governance, and development (for example, Baggio, Scott, & Cooper, 2010; Del Chiappa & Baggio, 2015; Dredge, 2006; Hristov, Minocha, & Ramkissoon, 2018; Liu, Huang, & Fu, 2017; Presenza & Cipollina, 2010; Tinsley & Lynch, 2001). These studies evidence that networking brings together a range of stakeholders and provides avenues to facilitate communication, information sharing, and knowledge transfer between them. Therefore, networks promote cooperative relationships for productive activity in tourism destinations (Merinero-Rodríguez & Pulido-Fernández, 2016; Scott, Baggio, & Cooper, 2008). As cooperation is a “condition for sustainable tourism planning and development” (Beritelli, 2011, p. 607), network interactions can benefit the realisation of SDGs in tourism. However, research on tourism networks and how they operate at destinations in developing tourism sustainably has received limited attention (Albrecht, 2013), possibly due to “the multiplicity and heterogeneity of tourism stakeholders” (Waligo, Clarke, & Hawkins, 2013,

* Corresponding author.

E-mail addresses: tnguyen8@uon.edu.au (T.Q.T. Nguyen), Tamara.Young@newcastle.edu.au (T. Young), Patricia.Johnson@newcastle.edu.au (P. Johnson), stephen.wearing@uts.edu.au (S. Wearing).

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p. 343). The theories presented in this paper – stakeholder theory, social network analysis (SNA), and actor-network theory (ANT) – are reviewed here to provide the basis for a framework to re-conceptualise stakeholder theories in tourism research.

The study of networks in tourism research is predominantly mathematically informed quantitative frameworks of social network analysis or network analysis (Abbruzzo, Brida, & Scuderi, 2014; Baggio et al., 2010; Benckendorff & Zehrer, 2013; Dredge, 2006; Friedrichs Grangsjø, 2003; Hristov et al., 2018; Liu et al., 2017; Racherla & Hu, 2010; Scott et al., 2008; Tinsley & Lynch, 2001). In this paper, we use the term social network analysis (SNA) in reference to these network theories in social science (Scott et al., 2008). SNA provides indices of connections between stakeholders, enables the identification of actor positions in social structures and linkages between them, and explains information flows and knowledge exchange within these actors. Scholars have found the application of SNA in tourism research to have limitations. For example, these studies have been criticised for being unable to explain the dynamics of a network or explore the processes of network formation (Albrecht, 2013; Dredge & Pforr, 2008).

Tourism network research focuses primarily on human actors in a network and tends to ignore the roles and influences of non-human elements. Thus, we propose a conceptual framework to examine network interactions of humans and non-humans at a tourism destination, particularly in the context of furthering shared ambitions (in this case, to promote the implementation of SDGs). This research is inspired by the ‘critical turn’ as a perspective on tourism that “can offer some seemingly exciting as well as innovative and progressive directions” (Bramwell and Lane (2014, p. 6) to address issues related to sustainable development. In doing so, this paper proposes the integration of stakeholder theory and network theories to assist researchers and practitioners to identify and recognise the significance of both human and non-human actors, as well as explain the process of transferring these actors into a network and exploring interactions between them. This re-conceptualised approach can provide more nuanced insights into the roles and influences of all destination actors in achieving the SDGs. Specifically, the concept of ‘tourism-scapes’ developed by Van der Duim (2005) from actor-network theory is positioned as a useful model to scaffold data and apply these findings in the field. The conceptual framework presented is a response to calls to involve host communities in tourism decision-making, and increasing participatory and bottom-up power for marginal and less advantaged stakeholders in tourism development (Khazaei, Elliot, & Joppe, 2015; Nguyen, Young, & Johnson, 2019; Wearing, Wearing, & McDonald, 2010).

The discussion that follows is divided into two sections. The first provides a review of literature on tourism stakeholders and network research, including individual applications of stakeholder theory, SNA, and ANT and the paired integrations of these theories. This section ends with a conceptual framework that integrates all three theories as a methodological approach to apply in a tourism context working towards the implementation of SDGs. The discussion and conclusion section that follows discuss the implications of this framework for tourism research and practice, and recommends possible future research approaches for each integration.

2. Literature review

According to Sharpley (2000), definitions of sustainable tourism have been approached from two angles: sustainable tourism as an economic activity, and sustainable tourism as an element of wider sustainable development. In this paper, following Bramwell (2015, p.205), sustainable tourism is understood as “regularly linked with the preservation of ecosystems, the promotion of human welfare, inter- and intra-generational equity, and public participation in decision-making”. This definition argues for all forms of tourism to be developed sustainably to meet “the needs of the present tourists and host regions while protecting and enhancing opportunities for the future” (UNWTO,

1998, p. 21).

Whilst sustainable development is an overarching goal for most nations engaging tourism as a tool for development (Ellis & Sheridan, 2014), many have argued that implementing sustainability principles is a difficult task (Pan et al., 2018; Tosun, 2001; Waligo et al., 2013). For example, maintaining a balance between resource exploitation for development and environmental and sociocultural protection in tourism is challenging (Creaco & Querini, 2003), particularly in the context of developing countries where economic development is a prioritized target (Tosun, 2001). Indeed, some have argued that the achievement of triple bottom line sustainability is near impossible, and trade-offs often occur whereby particular pillars of sustainability (for example, economic sustainability) are prioritized over environmental or socio-cultural indicators (Lundie, Dwyer, & Forsyth, 2007).

Good destination governance is, therefore, recognised as key to achieving sustainability goals (Bramwell, 2011; Hall, 2011). Destination governance refers to the process of tourism planning, policy- and decision-making, through stakeholder interaction and participation in collective actions, and is aimed to improve stakeholder and destination performance (Beritelli, Bieger, & Laesser, 2007; Padurean, 2010; Pechlaner, Volgger, & Herntrei, 2012). Stakeholder participation is viewed by many researchers as central to sustainable development (Byrd, 2007; Ioannides, 1995; Timur & Getz, 2008; Waligo, Clarke, & Hawkins, 2015). However, research regarding tourism stakeholder involvement in sustainable development remains limited (Mistilis, Buhalis, & Gretzel, 2014). This paper addresses this gap by presenting a conceptual framework to investigate the process of stakeholder involvement and interaction implemented through networking, and how it can result in a chain of actions towards achieving specific SDGs.

2.1. Stakeholders and their involvement in sustainable development

Freeman (1984) defines stakeholders as “any group or individual who can affect or is affected by the achievement of the organisations objectives”. Similarly, Baggio and Cooper (2010, p. 1759) view stakeholders as “any person, group or institution that has an interest in a development activity, project or program”. In tourism, stakeholders are viewed as individuals, groups, and organisations such as tourists, tourism businesses, and local communities (Baggio et al., 2010; Milne, 1998; Murphy & Murphy, 2004). Leiper (2004) views tourism stakeholders as a system of individuals and organisations involved in tourism activities within the generating region, the transit region, and the destination region. Applying these definitions, tourism stakeholders are those individuals and groups who can affect, or are affected by, the achievement of tourism development objectives.

The stakeholder approach is a significant area of tourism research (Merinero-Rodríguez & Pulido-Fernández, 2016), and has been divided into three broad streams: stakeholder perspectives, stakeholder relationships, and stakeholder participation. First, stakeholder – particularly resident – perspectives and attitudes towards tourism development have been extensively studied (Anastasiadou, 2008; Ap, 1992; Burrai, Font, & Cochrane, 2015; Chen, 2015; Diedrich & García-Buades, 2009; Dincă, Surugiu, Surugiu, & Frenț, 2014; Gursoy & Rutherford, 2004; Imran, Alam, & Beaumont, 2014; Tosun, 2002; Trawogger, 2014; Zehrer & Hallmann, 2015). Although destination stakeholders may hold positive attitudes to tourism development, their behaviours can be supportive or unsupportive depending on the influences of other stakeholders.

Second, research concerned with stakeholder relationships within organisations and destinations addresses the underpinning interactions, such as cooperation (Beritelli, 2011; Czernek, 2013; Fyall, Garrod, & Wang, 2012), conflict (Kuvan & Akan, 2012; Yang, Ryan, & Zhang, 2013), competition and co-competition (Damayanti, Scott, & Ruhanen, 2017; Friedrichs Grangsjø, 2003; Guo, Zheng, Ling, & Yang, 2014; Kylanen & Mariani, 2014). While others have focused on stakeholder participation in tourism policy making and planning (Byrd, 2007;

Hatipoglu, Alvarez, & Ertuna, 2016; Khazaei et al., 2015; Rasoolimanesh, Jaafar, Ahmad, & Barghi, 2017; Saufi, O'Brien, & Wilkins, 2014; Tosun, 2000, 2006; Waligo et al., 2013). The benefits of stakeholder participation are undoubted, however, finding effective ways to involve individuals and groups is not an easy task. This process can be complicated because the process from awareness and attitudes to intention and action are influenced by various factors (Ajzen, 1991). These three research streams can be seen as a process of planned behaviour given that stakeholder perspectives, attitudes, awareness, and interactions, are seen as the basis for their participation (actions) in tourism development. Conversely, stakeholder participation can influence their perspectives and attitudes. As Hatipoglu et al. (2016) note, when individuals and groups are involved in tourism with high levels of interaction with other stakeholders, they are more knowledgeable about tourism which leads to increased engagement in tourism development.

2.1.1. Stakeholder involvement in sustainable development

In terms of sustainable tourism development, various local, national and global stakeholders are involved, including governments, non-government organisations, tourism industry sectors, host communities, tourists, academia and the media (Ellis & Sheridan, 2014; Swarbrooke, 1999). Byrd and Gustke (2004) seek to understand stakeholder support for sustainable tourism development, and stakeholder participation in tourism and political activities. They present a decision tree that identifies twelve stakeholder groups along the axes of support for sustainable development and participation in tourism (see, Fig. 1).

Fig. 1 illustrates a model that shows that stakeholders may have a low level of participation in the tourism industry, yet they strongly support sustainable development. On the other hand, stakeholders may have a low level of support for sustainable tourism development even when they are highly involved in the tourism industry. Thus, all kinds of stakeholders can express their concern and contribute to the achievement of sustainable development regardless of their involvement in tourism, and vice versa.

2.1.2. Stakeholder theory

Freeman's (1984) stakeholder theory has been applied to the strategic management of industries, organisations, societies and communities, in efforts to understand the various ways of managing and governing an entity (such as, a tourism destination) consisting of many individuals and groups (Donaldson & Preston, 1995; Hazra, Fletcher, & Wilkes, 2017; Khazaei et al., 2015; Sheehan & Ritchie, 2005; Yuksel, Bramwell, & Yuksel, 1999). Stakeholder theory provides a platform to argue that the success of a tourism destination is dependent on stakeholder engagement; that destination management organisations need to identify and understand interests of all stakeholders (Mowforth & Munt, 2016). Stakeholder theory emphasises the importance of stakeholders and their identification for tourism organisations and destination

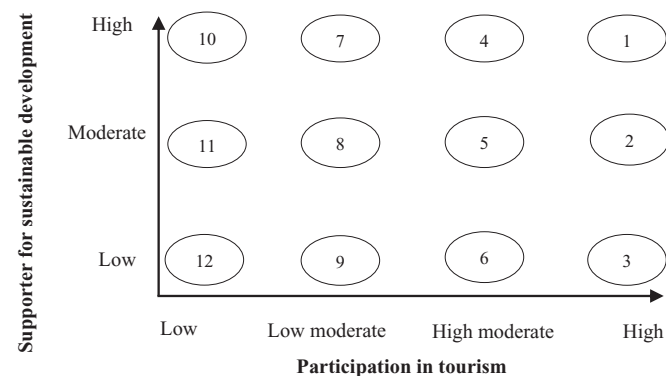


Fig. 1. Stakeholder groups (adapted from Byrd and Gustke (2004).

governance (Khazaei et al., 2015). Whilst there may be no requirement for equal treatment between stakeholders, stakeholder theory informs the importance of acknowledging, considering and addressing their interests (Donaldson & Preston, 1995; Sheehan & Ritchie, 2005).

Mitchell, Agle, and Wood (1997) argue that stakeholders are differentiated by salient levels. They define salience as the degree of attention (or priority) that managers give to competing stakeholder claims (Mitchell et al., 1997). The salient level of a stakeholder is determined by the attributes of power, legitimacy, and urgency. For example, because resources of an organisation (or a destination) are limited, managerial attention is prioritized for powerful and salient stakeholders (Khazaei et al., 2015; Sheehan & Ritchie, 2005). For this reason, there is increasing concern for disadvantaged and less powerful stakeholders (Khazaei et al., 2015; Truong, Hall, & Garry, 2014; Wearing, Wearing, & McDonald, 2010). More recent stakeholder research recommends flexibility in strategies for understanding stakeholder motivations, addressing this issue by exploring the engagement of marginal and less powerful groups and finding that cooperative relationships can emerge between stakeholders (Khazaei et al., 2015). Advances in stakeholder theory respond to the need for broad involvement of all stakeholders (especially host communities), and their collaboration in tourism planning, policy, and decision-making (Ellis & Sheridan, 2014; Rasoolimanesh et al., 2017; Saufi et al., 2014; Swarbrooke, 1999).

Stakeholder theory is clearly essential to understanding tourism stakeholders and their perceptions and roles in destination development, however, its limitation lies in a lack of attention to relationships and interactions between the stakeholders (Beritelli, 2011). Stakeholder theory focuses on dyadic relationships between each stakeholder and an organisation, but what is often neglected is the complex relationships that exist between stakeholders and stakeholder networks. In this regard, Mistilis et al. (2014) note that an organisation has to respond not only to the influence of each of its stakeholder but also to the complexities of inter-stakeholder relationships. Stakeholder theory also neglects the roles of non-human actors, such as place and culture (Driscoll & Starik, 2004; Luoma-aho & Paloviita, 2010). Yet, as Driscoll and Starik (2004, p. 69) argue, non-human actors should be “the primordial and primary stakeholder of all firms, deserving of immediate attention by management researchers and practitioners”.

Driscoll and Starik (2004) reconceptualise the three above-mentioned attributes of stakeholder theory and develop an additional attribute of ‘proximity’, which refers to the “state, quality or fact of being near or next” (Driscoll & Starik, 2004, p. 63). This additional attribute supports the reality that organisations are influenced by various external environments. While the stakeholder typology of power, legitimacy, urgency, and proximity may be used to analyse both human and non-human actors engaged in tourism development, a problem arises when using these attributes to analyse non-human elements as actors. This is because non-human actors may have power and legitimacy but they are unable to make a claim. Thus, there is a need to apply other frameworks to examine and analyse the influence of non-human actors in tourism research. The following section argues that network analysis based on Actor Network Theory (ANT) is useful for addressing this omission.

2.2. Network analysis in tourism research

The complexity and fragmented nature of tourism makes network analysis well-fit with tourism study (Scott et al., 2008; Van der Zee & Vanneste, 2015) and “may be more important than in other areas of the economy of many countries” (Scott et al., 2008, p. 15). Tourism stakeholders are often connected because tourism comprises “complementary products of activities, accommodation, transport and food co-exist alongside support activities and infrastructure to form a complex system of connections and interrelationships” (Pavlovich, 2003, p. 203), thus the industry is comprised of a mixture of both human and

non-human elements. Accordingly, the agglomeration, co-location, proximity, and interconnectedness of a range of individuals and groups in tourism destinations offer a fertile context for stakeholder and network study (Baggio et al., 2010; Chim-Miki & Batista-Canino, 2017; Kylanen & Mariani, 2012).

The application of a network approach in tourism research can be divided into three overarching streams based on the lens of researchers towards networks. The first considers a network as a perspective – as a viewpoint, approach or lens of analysis aimed at understanding phenomena, whether or not they are perceived as networks. The second views networks as one type of stakeholder interaction, whereby research objects are perceived as existing in networks and can therefore be explained by network theory or stakeholder theory (Kimbu & Ngoasong, 2013; Nogueira & Pinho, 2015; Presenza & Cipollina, 2010). These first two streams of research often overlap and are implied within studies that seek to explain and visualise the structure of tourism networks, for example a policy network (Dredge, 2006), a business network (Tinsley & Lynch, 2001), network governance (Baggio et al., 2010), a collaborative academic network (Benckendorff & Zehrer, 2013; Racherla & Hu, 2010), a tourist attraction network (Liu et al., 2017), a coopting network (Friedrichs Grangsjø, 2003), a marketing network (Nogueira & Pinho, 2015), a tourist expenditure network (Abbruzzo et al., 2014), and a leadership network (Hristov et al., 2018). In these studies, a mathematically-informed network analysis is often applied. An assumption is that network analysis is well-suited for the nature of a phenomenon that involves linkages or connections between nodes. Social networks have been found to be significant for improving communication between stakeholders, and for explaining the processes of, and motivations underlying, knowledge transfer (Albrecht, 2013; Baggio & Cooper, 2010; Del Chiappa & Baggio, 2015). The third research stream relates to the more recent interest in exploring and explaining the formation of a network (Dedeke, 2017; Rodger, Moore, & Newsome, 2009; Tribe, 2010). In these studies, Latour's (2005) Actor Network Theory (ANT) has inspired new directions to study networks in tourism research.

Drawing on Latour's (2005) concept of 'assemblages' in ANT, coupled with tourism ordering (Franklin, 2004; Jóhannesson, 2010), Van der Duim (2005, 2007) introduced the concept of 'tourismscapes'. Tourismscapes are defined as "actor-networks transgressing different societies and regions and connecting systems of transport, accommodation and facilities, tourism resources, environments, technologies, people, and organizations" (Van der Duim, Ren, & Jóhannesson, 2013, p. 7). Within tourismscapes, a range of human and non-human elements are recognised, including tourists, tourism suppliers, tourism materiality, and machines and technologies. These elements are viewed as the basis for locating human and non-human actors in tourism destination development, for the purposes of this paper, the authors drew from Van der Duim (2007) work to develop the model depicted in Fig. 2.

Tourismscapes are heterogeneous networks that recognise modes of ordering that can create different versions of tourism and tourism destinations according to the type of actor involved. Modes of ordering are coherent sets of strategic notions carried out in the materiality of heterogeneous processes to make up tourism and constituent organisations (Van der Duim et al., 2013). They are established through a translation process by which entities are modified or displaced by their various and contradictory interests (Jóhannesson, 2010; Ren, 2010). The multiplicity of modes of ordering can enhance the resilience and reinvention possibilities of tourismscapes (Povilanskas & Armaitienė, 2011).

Three main points emerge from the discussion in this section. First, the main focus of network research in tourism appears to be quite rigidly used, to explain structures in social relationships with little attention to how actors are transferred into a network or the roles that networks can play in encouraging stakeholder actions. Second, the two most documented network theories in the tourism literature are SNA and ANT and, while both these theories seek to understand social

structure and networking processes, they differ in terms of their application (Scott et al., 2008; Van der Duim, Ren, & Jóhannesson, 2017). Finally, Van der Duim's (2005, 2007) tourismscapes responds to the critical turn in tourism research and offers a practical framework for researchers to rethink how tourism networks can be researched. This tool has the potential to provide further insight into the processes and the dynamics of a network.

2.2.1. Social network analysis

Social Network Analysis (SNA) is defined by Otte and Rousseau (2002, p. 441) as "a strategy for investigating social structures" that provides a map of network actors and the linkages between them. In this context, a social network is a "specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behaviour of the persons involved" (Mitchell, 1969, p. 2). Network actors are social entities (that might be individuals, organisations or collective units) and the linkages between them are known as relational ties (Wasserman & Faust, 1994).

As well as identifying actors and the linkages between them, SNA explains information flows within the network through direct links from an actor to other actors, and indirect links via bridging actors. However, SNA neglects the factors that shape the development and dynamics of networks (Albrecht, 2013). These factors are important because they can change the centrality of actors, the density of the network, and other network characteristics; such as, how actors are transferred into a network, why a network is created, and how messages are spread throughout a network without the change of meanings (Albrecht, 2013; Dredge & Pforr, 2008). While actors of a social network interact to exchange information, they are not required to act towards a collective goal which can make a social networking approach impossible to examine a network seeking collective goals (such as, implementing SDGs). For researchers seeking knowledge about how destinations implement SDGs as a collective ambition, finding out how the *collectif* (Van der Duim, 2007) behaves when aligning their goals is crucial. A *collectif* is "an emergent effect created by the interaction of the heterogeneous parts that make it up" (Verschoor, 1997, cited in Van der Duim, 2007, p. 965) which, in this case, is comprised of both the human and non-human elements of a tourism network. The following discussion explains how ANT has been introduced into the tourism literature to address these limitations.

2.2.2. Actor-network theory

Actor Network Theory (ANT) focuses on how stakeholder entities shape and impact each other (Vicsek, Kiraly, & Konya, 2016) acknowledging that the network is space where associations are formed and processes of translation occur. Symmetry and association emerge as overarching principles in ANT (Van der Duim, 2007), whereby symmetry is expressed through associations between human actors and non-human actors, as well as through the relationships between social and technical elements (Beard, Scarles, & Tribe, 2016; Latour, 2005). Thus, ANT provides an analytical tool for studying innovation in tourism beyond the more commonly used human-centred theories, such as stakeholder theory (Buijtendijk, Blom, Vermeer, & Van der Duim, 2018). In ANT, associations are developed through 'translation', the process of transforming heterogeneous entities into actor-networks (Van der Duim, 2007). Through this process, the characteristics of actors are defined, the relationships between them are formed (Dedeke, 2017) and, most importantly, "the processes of negotiation, mobilization, representation and displacement" are revealed (Van der Duim, 2007, p. 966).

Callon (1986) proposes four phases of translation: problematisation, interessement, enrolment, and mobilisation. Through these phases, the things that are previously different are related, from which convergences and homologies are created to identify new entities and relations (Tribe, 2010). Rodger et al. (2009) apply these phases of

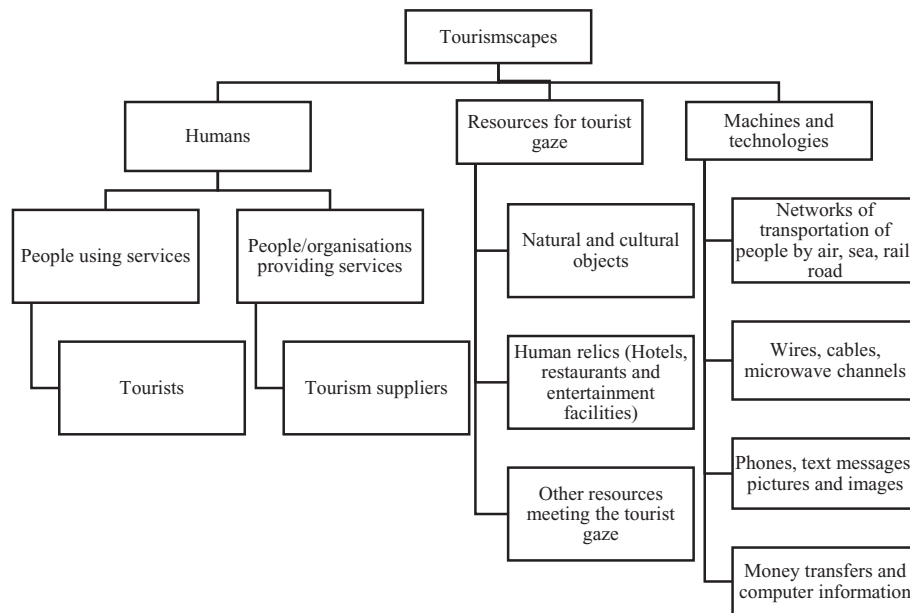


Fig. 2. Elements of tourismscapes (summarised from Van der Duim et al., 2013).

translation in their study of wildlife tourism, but divide ‘problematisation’ into ‘Obligatory Passage Point’ (OPP) and ‘problematisation’. In their study, they find the translation process involves a focal/principal actor who identifies interests (problematisation), defines goals and objectives (the OPP), and convinces other actors into accepting the OPP (interessement). After other actors accept these interests as defined by the principal actor (enrolment), the principal actor represents the network (mobilization). Rodger et al. (2009) develop an additional phase named ‘black-boxing’ in which the identity and performance of the network is formed through actions and regulated practices.

The term ‘black-box’ in the social sciences refers to “accepted and agreed pieces of knowledge. A black-box is often part of a more complicated system that is so unquestioned and stable that it can be ignored within that system” (Rice, 2011, p. 33 citing Latour, 1988). For example, the term ‘sustainability’ is a metanarrative and, as such, a complex black-box because “within this black-box are many more black-boxes, each one a closed, fixed, stable world” (Rice, 2011, p. 33). Therefore, the researcher must break complex black-boxes down into smaller ones. Sustainability must then be broken down into areas, such as, sustainable architecture, sustainable energy systems and, in this case, sustainable tourism.

Networks in ANT are heterogeneous, and comprise both human and non-human actors that are ordered and defined with new functions in a chain (Ren, 2010). According to Ren (2010, p. 202), actors involved in networks need “the capacity and capability of linking, associating and ordering within the networks”. These networks are formed through a principal (or focal) actor who, through the translation process, described above, engages other actors to implement specific tasks (Dedeke, 2017; Paget, Dimanche, & Mounet, 2010; Rodger et al., 2009). The principal actor must have sufficient knowledge and communication skills (Dedeke, 2017), as well as an ability to connect with a wide range of stakeholders (Paget et al., 2010).

While ANT explores the processes of identifying problems and setting up goals, enrolling other actors and so on, it does not help us to identify the principal actor in a network and does not uncover “how to proceed or what realities we should choose” (Van der Duim et al., 2017, p. 143). Further, the boundaries of an actor-network change frequently and the actors involved in the network are dynamic, thus an actor-network might become an infinite chain of associations (Polk, 2015). When applying ANT to form a network, there is a need to select a purpose or basis of network interactions, and adopt actor identification

to overcome those limitations. Researchers have to “unravel the nested *collectif* under study, focusing on the linkages with material resources and less visible actors” (Steins, 2001, p. 20). As Stein explains, decisions of a *collectif* for a certain course of action are influenced by a variety of relationships and their meanings, but networks will be reshaped over time through the process of collective action itself.

Stakeholder theory, SNA, ANT have been applied to a wide range of industry contexts. Table 1 summarises some of the main applications of these theories in the context of tourism research.

2.3. Integration of theories for networking in sustainable tourism development

The above review of literature has presented individual applications of stakeholder theory, SNA, and ANT in tourism research, and outlined the limitations of each theory in addressing stakeholder interactions and relationships. We now present four integrations of these theories, as illustrated in Fig. 3.

Fig. 3 represents: (1) the integration of stakeholder theory and social network analysis; (2) the integration of stakeholder theory and actor-network theory; (3) the integration of actor-network theory and social network analysis; and, (4) the integration of stakeholder theory, social network analysis, and actor-network theory. Each of these integrations are explained below. Our development of the fourth integration seeks to address the deficiencies in current theory for understanding networking in sustainable tourism development.

2.3.1. Integration of stakeholder theory and social network analysis

Stakeholder theories have been individually applied to identify stakeholder typologies. However, as discussed above, such typologies do not consider the linkages between stakeholders and it is therefore difficult to determine how they are related to each other and how critical stakeholders influence other stakeholder (Nogueira & Pinho, 2015). For example, some stakeholders may have few linkages with other stakeholders, but they are critical stakeholders who exert influence over other stakeholders, denoting a relationship of power. In response to such critiques, researchers have integrated stakeholder theory with SNA to examine tourism stakeholder networks (Del Chiappa & Presenza, 2013; Kimbu & Ngoasong, 2013; Nogueira & Pinho, 2015; Presenza & Cipollina, 2010; Timur & Getz, 2008). For example, Del Chiappa and Presenza (2013) introduce some network properties as

Table 1
Application of stakeholder theory, SNA, and ANT in Tourism Theory.

Theory	Themes in tourism literature and examples
Stakeholder theory	<ul style="list-style-type: none"> - Roles of stakeholders and stakeholder identifications (Byrd, 2007; Nogueira & Pinho, 2015; Sheehan & Ritchie, 2005) - Stakeholder perspectives about tourism development (Byrd et.al, 2009; Zehrer & Hallmann, 2015) - Stakeholder involvement in tourism development (Khazaei et.al, 2015), tourism marketing (Robson & Robson, 1996) and sustainable tourism development (Byrd, 2007; Waligo et al., 2013) - Stakeholder management (Sautter & Leisen, 1999) - Stakeholder power (Hazra et.al, 2017)
Social network analysis	<ul style="list-style-type: none"> - Types of tourism networks (Abbruzzo et.al, 2014; Baggio et al., 2010; Benckendorff & Zehrer, 2013; Dredge, 2006; Friedrichs Grangsjø Friedrichs Grangsjø, 2003; Hristov et.al, 2018; Liu et.al, 2017; Racherla & Hu, 2010; Tinsley & Lynch, 2001). - Knowledge transfers (Del Chiappa & Baggio, 2015) - Environmental sustainability (Erkuş-Öztürk & Eraydın, 2010; Polese & Minguzzi, 2009) - Innovation (Novelli et.al, 2006; Zach & Hill, 2017)
Actor-network theory	<ul style="list-style-type: none"> - Stakeholder collaboration (Arnaboldi & Spiller, 2011) - Roles of non-human actors in tourism development (Larsen, 2005; Nguyen et al., 2019; Ren, 2011) - Environmental sustainability (Buijtenlijk et.al, 2018; Dedeker, 2017; Nguyen et al., 2019; Rodger et.al, 2009) - Innovation (Buijtenlijk et.al, 2018; Jóhannesson, 2010; Paget et al., 2010) - Cultural tourism (Jansen-Verbeke, 2010; Ren, 2010) - Event tourism management (Jóhannesson, 2010) - Tourism academics culture and nature (Tribe, 2010)

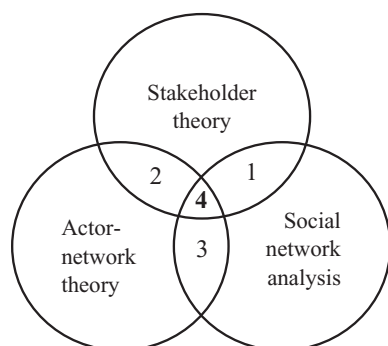


Fig. 3. Integrations of stakeholder theory and network theories.

important to analyse in network structures and position of stakeholders in network, such as the density of the network, and the positionality of actors within the network (Del Chiappa & Presenza, 2013). Similarly, Nogueira and Pinho (2015) find that the higher the network density, the more closely stakeholders work together in a team. According to Borgatti, Everett, and Johnson (2018), the positionality of actors within a network relates to centrality which is measured by in- and out-degree, between-ness, and close-ness. A central stakeholder can be referred as prominent or influential, or having great control, involvement, prestige, and power (Borgatti et al., 2018).

In this integration, the application of stakeholder theory has been found to limit the number of actors involved in network analysis. Because SNA considers all relational interactions to identify nodes and linkages (which might lead to thousands of actors involved in the network), by using stakeholder theory a range of insignificant actors can be eliminated. When identifying connections between key stakeholders implementing their functional role in a network, SNA strengthens explanations of stakeholder power and influences (Nogueira & Pinho, 2015). Network analysis explains the relation between the position and responsibility of stakeholders and their control over resources (Nogueira & Pinho, 2015). This integration might, to some extent, explain stakeholder actions in relation to power and network centrality (Beritelli & Laesser, 2011).

Integrating stakeholder theory with SNA remains limited in its ability to explore the formation and dynamics of networks. While stakeholder theory focuses on identification and classification (Nogueira & Pinho, 2015), SNA can only provide a 'snapshot' of the structure of network (Albrecht, 2013). As Dredge and Pforr (2008) note, SNA is not a normative theory that explains the process of actor interest and enrolment in a network. Moreover, as mentioned above, SNA does not

view non-human actors as being involved in social networking (Wasserman & Faust, 1994). Thus, this integration does not help to address the limitations of stakeholder theory in explaining the roles non-human elements play in a network. When conceptualising tourism networks as collections of stakeholders, they can never be thoroughly understood without considering the non-human entities that facilitate the industry as their presence and/or absence significantly affects the tourism system.

2.3.2. Integration of stakeholder theory and actor-network theory

The integration of stakeholder theory with ANT recognises the roles and influences of non-human actors on human actions on both individual and organisational levels, which is critical to comprehensively understand complexities of an organisation's environment (Driscoll & Starik, 2004; Luoma-aho & Paloviita, 2010). For example, as Steins (2001, p. 19) explains, "without his vessel, nets, oilskins, navigation equipment, fishing licences, crew, competing colleagues, and buyers of his catch, the fisherman would not be a fisherman". Similarly, without the physical existence of buildings, transport vehicles, infrastructure, internet, signage, brochures, restaurants, and so on, a place could not be a tourist destination.

From an ANT perspective, multiple actors have the capacity to act and to take part in creating and mediating tourism places and experiences; including human actors, and non-human actors, such as objects, technologies and spaces (Ren, 2010; Van der Duim, 2007). By recognising the significance of mediation, attention can be directed to materiality and hybridity in tourist performance and experience, with both human and non-human actors positioned as central to tourism networks on an organisational or destination governance level working towards achieving sustainability goals (Haldrup & Larsen, 2006). Based on the principle of symmetry within ANT, the integration of stakeholder theory with ANT has been conceptualised by Luoma-aho and Paloviita (2010) as "actor-networking stakeholder theory". Non-human factors influencing human activities can be revealed during the practice of the translation process (Luoma-aho & Paloviita, 2010).

In addressing the limitations of stakeholder theory, ANT can provide understanding of the influence of networking in stakeholder collaboration (Arnaboldi and Spiller (2011)). ANT recognises the legitimacy of stakeholders, and the interactions and relationships between stakeholders during a collaborative project (Arnaboldi & Spiller, 2011). When examined using ANT, the power and legitimacy attributes of stakeholders are seen to effect the level of representativeness and legitimisation which can increase for both powerful and less powerful stakeholders (Arnaboldi & Spiller, 2011). This integration reveals that ANT can help to explain the process of transferring potential power into

ability of act and influence.

In stakeholder theory, power is viewed as a relational attribute of stakeholders (Mitchell et al., 1997) and it will become useless if it does not go with legitimacy or urgency. Consequently, stakeholders find it impossible to exert any influence in their organisation (Nogueira & Pinho, 2015). From an ANT perspective, power is not a thing or resource to possess, but a result of relational processes: the exercise of power does not depend on entities but on actions and relations between entities (Van der Duim, 2007). This difference in perspective can challenge the compatibility of these theories. However, underpinning both these theories is a similar argument: if power is not exerted or exercised through relational interactions, the entity holding this power becomes powerless. Arguably, those stakeholders who hold power might exercise their power if they enrol in actor-networks because actor networking brings a right for an actor to act and influence other actors (Arnaboldi & Spiller, 2011). Thus, the integration of stakeholder theory with ANT can address the limitations of SNA and stakeholder theory, precisely because non-human elements are seen to assist the transfer of stakeholders' potential power to actual power.

2.3.3. Integrations of social network analysis and actor-network theory

To date, SNA and ANT have not been integrated in tourism to research networks. However, integrating these theories can help to explain a whole networking process and position actors in the network. For example in a healthcare network study, Wickramasinghe and Bali (2009) introduce "S'ANT" as a convergence that helps to explain the formation and structure of a network. In their study, Wickramasinghe and Bali (2009) adopt ANT first to explore the process of forming a network. SNA is then applied to visualise the structure of network and explain the knowledge flow in this network. This integration has a limitation that if, after applying ANT non-human actors are found to be involved in the network, and if the original principles of SNA are maintained, it may be impossible to structure non-human actors in the network by using SNA given its focus only on human interactions.

It is somewhat surprising that this convergence has not been applied in tourism. An integration of SNA and ANT might be beneficial to overcoming the abovementioned limitations to improve understandings of existing integrations between stakeholder theory and SNA. This is because ANT provides two essential principles to explain network formation. First, ANT sets 'performance' as a key rule for actors involved in a network (Ren, 2010), whereby "if there is no performance, there is no network effect. Entities are no longer actors, no longer enrolled in the network" (Ren, 2010, p. 201). Outside the network these actors might hold other functions but, in order to perform in the network and implement network goals, the actors will be re-defined, re-assembled, re-ordered, re-enacted, and re-allocated new functions (Paget et al., 2010). Second, ANT 'translation' process provides a practical perspective for exploring the motivations of human actors in joining the network, i.e., network formation (Albrecht, 2013; Carroll, Richardson, & Whelan, 2012; Luoma-aho & Paloviita, 2010). Through processes of network formation, actors are assigned characteristics and their relationships are established (Rodger et al., 2009).

2.3.4. Integrations of stakeholder theory, social network analysis and actor-network theory

The literature review above provides insight into the possibilities and limitations of various theories employed to understand stakeholders in tourism destination governance. These theories have been critiqued in order to develop a conceptual framework to examine tourism networks and provide recommendations for the application of tourism networks and provide recommendations for the application of tourism networks. This conceptual framework can enable the exploration of processes that form networks of actors working towards the achievement of the United Nations SDGs. The integration of the three theories reviewed above (stakeholder theory, SNA and ANT) as key to understanding the processes of networking in the implementation of SDGs is proposed and depicted in the framework illustrated in Fig. 4.

The framework presented in Fig. 4 can guide research processes from research design through to data analysis by a step-by-step process. First, researchers can identify a potential list of stakeholders of both the tourism human and non-human actors that are necessary to implementing SDGs and the practical problems related to sustainable tourism development. Second, an integration of stakeholder theory and SNA can identify a social network of human actors (see, for example Nogueira and Pinho (2015) discussed above.) This application of stakeholder theory with stakeholder attributes, and SNA with some important network indices such as network centrality, can assist in segmenting human stakeholders into different groups, such as central and critical stakeholders, to forecast potential stakeholders involved in an actor-network. Third, an investigation guided by the ANT translation process and rules of network actors can be conducted to explore the process of stakeholder enrolment and motivation to act in a tourism actor network.

This conceptual framework, given its integration of each theory, recognises that actors cannot maintain their network function continuously and that actors change frequently. As Van der Duim (2007) asserts with the concept of tourism landscapes, recognition of the dynamism of actors and the continuity of the network is key. Whilst this means that the boundaries of actor-networks are unstable, networks can be maintained through translation. Application of translation processes from ANT enables consideration of the involvement of non-human actors as equally important as human actors. It is through associations between human and non-human actors that an actor-network - or tourism landscapes - is revealed. Translation can be applied, practically, in data collection. For example, if researchers employ qualitative methods, such as interviews, the translation process can guide questions through the process of identifying problems and goals, encouraging other actors to be involved, and enrolling other actors or be enrolled to performing the network. The involvement and influence of non-human elements can be tracked down from this process.

From the results of the second step and an analysis of the six phases of translation processes, researchers can identify and allocate elements of tourism landscapes into different groups (see, authors' model in Fig. 2), commencing with the principal actor and other key actors. Following the translation process enables the exploration of new elements involved in the tourism landscapes, such as, how actors associate together and how relationships between them are established for the implementation of sustainability goals (as identified in the first step and exposed during the translation processes). In the following section, this framework is described with reference to specific SDGs, and the potential practical implications, methodological applications, and theoretical contributions are discussed.

3. Discussion & conclusion

This paper has outlined the role of stakeholder theory in providing a perspective of stakeholder identification to validate data for SNA (Nogueira & Pinho, 2015). SNA was discussed as a strategy for investigating social structures and identifying the connections between stakeholders (Otte & Rousseau, 2002). It was found that the integration of stakeholder theory and SNA can enable the identification of potential human actors in tourism landscapes. ANT was explained as a more practical and methodological theory for guiding exploration of the processes for human actors involved in tourism landscapes, from which the involvement of non-human actors is exposed (Van der Duim et al., 2017). In the development of a conceptual framework, while the core concept of each theory is maintained, it was found that these theories can complement each other and address limitations in explaining stakeholder interactions and relationships. An integration of the three approaches can guide research concerned with analysing the influence of non-human actors as key stakeholders at tourism destinations, and can assist in explaining the movement of stakeholders from one group to another group when their power and legitimacy are changed.

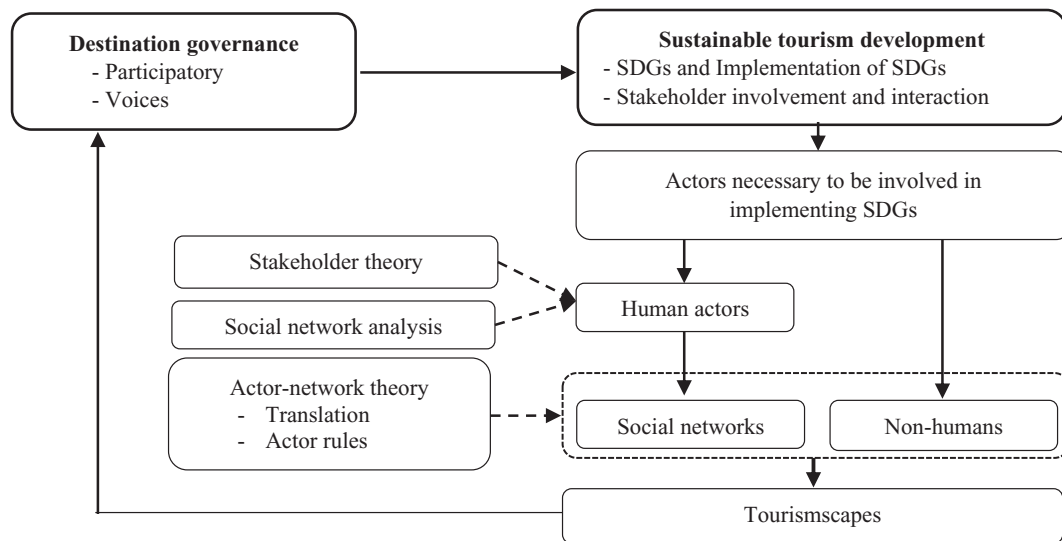


Fig. 4. A framework for integrating stakeholder theory, social network analysis, and actor-network theory for the implementation SDGs.

The integration of the three theories presented in this paper can help to explore the changing power of stakeholders involved in a network. Powerful stakeholders at a tourism destination can be identified by the application of stakeholder theory, and the integration of stakeholder theory with SNA. However, power is not an attribute of human stakeholders: power arises in relations (Introna, 1997). Given its focus on association between actors rather than the positional attributes of actors, ANT can examine power relations in a network (Albrecht, 2013). Therefore, in tourism stakeholder research, these two theories combined allow for comparisons of power before and after stakeholders are involved in an actor-network. Such analyses can explain why a destination stakeholder can have more influence than other stakeholders in destination governance where, in another situation, they might not exert any influence. Conversely, some stakeholders may have a very limited voice in tourism policy-making but when they are involved in a network, their voice may be heard and may influence the outcomes of the network. Therefore, on the one hand, this conceptual framework recognises powerful and legitimate stakeholders and, on the other hand, empowers less advantageous and less powerful stakeholders by acknowledging their right to act and influence other actors.

The integration of stakeholder theories presented in this paper can assist research concerned with destination governance in terms of stakeholder participation and sustainable tourism development. With different modes of ordering, each actor can be shaped differently in different tourism landscapes. Therefore, when the target of ordering is to support the achievement of a specific SDG, actors can be redefined through translation processes and allocated new functions related to implementing sustainability goals. This framework focuses directly on SDG 17 as it aims at networking and encourage a broad involvement of stakeholders. This is one of the key goals of the United Nations SDGs, referring to the importance of partnerships to implement the SDGs.

In relation to methodological approaches, the first integration of stakeholder theory and SNA can be used in research explaining the structure of networks in sustainable tourism development; such as the differences between networks for tourism generally, and sustainable tourism specifically. This integration is most complementary to quantitative network analysis, such as surveys of large samples. A mixed method approach can be employed in case of a small sample, in which qualitative methods (such as interviews) are used to collect data and SNA techniques are used to analyse the data. The second integration of stakeholder theory and ANT is most suitable to qualitative studies, particularly case study research, seeking to uncover the complexity of human and non-human stakeholders at destinations. This integration

provides an avenue for understanding the uniqueness of destinations in relation to the stage of tourism development, the types of tourism resources, and the geographical and sociocultural characteristics. These factors make tourism destinations distinguishable from each other in terms of the number of stakeholders and the intensiveness of stakeholder relationships. A multiple-case study can be conducted to make a comparison, but the selection of destinations should be carefully considered in terms of scales, as well as the similarities, and differences between them.

With the third integration of SNA with ANT, and the fourth integration that combines all three theories, researchers can adopt a qualitative research or mixed-method research approach. While a quantitative study would be bounded by the mathematical framework of SNA, a qualitative study is framed by the principles of ANT and stakeholder theory. Either a case study or participatory research strategy is suitable for the research applying these theoretical integrations. In particular, the integration of stakeholder theory and SNA can be employed as a purposive sampling strategy, as this integration can identify a range of stakeholders with different attributes, and help to categorise stakeholders into different groups.

The fourth theoretical integration proposed in this paper - developed into a framework converging stakeholder theory, SNA and ANT - contributes to explain nuances in network formation and the roles of non-human elements in sustainable tourism development. The conceptual framework guides the application of tourism landscapes in examining a network of tourism actors operating and interacting to implement SDGs. This framework is a response to calls for involving host communities in tourism decision-making, and increasing participatory and bottom-up power for marginal and less advantaged stakeholders in tourism development (Khazaei et al., 2015; Nguyen et al., 2019; Wearing, Wearing, & McDonald, 2010).

Future research on network approaches for sustainable tourism development can apply this framework in three ways. First, to enhance knowledge and understanding of the diverse and dynamic relationships between networks in tourism destinations. Second, to understand the various patterns of stakeholder relationships in sustainable development. Third, to engage, facilitate and enable research to “describe and enact relations, capacities, identities, and realities in ways that we believe improves our understanding of the workings and doings of tourism” (Van der Duim et al., 2013, p. 10). These theoretical contributions provide practical insight into the significance of non-human elements in encouraging stakeholder actions towards sustainable development and enhanced destination governance.

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Thi Quynh Trang Nguyen is a PhD candidate in the Newcastle Business School, Faculty of Business and Law, The University of Newcastle. She holds a fully-funded scholarship PhD study to research destination management, governance, stakeholder relationships, network analysis, and sustainable development. Trang held the position of lecturer in the Tourism and Hospitality Faculty at the National Economics University in Vietnam from 2010 to the commencement of her candidature.



Tamara Young is a Senior Lecturer and Researcher in the Newcastle Business School. Her research is in the multi-disciplinary field of tourism studies, with a particular emphasis on critical tourism theory and cultural research methodologies. She co-authored *Tourist Cultures: Identity, Place and the Traveller* (Wearing, Stevenson, & Young, 2010) and has published widely in book chapters and international journals. Tamara's research on tourism curriculum, in particular the Indigenisation of Curriculum, is nationally and internationally recognised. Her commitment to delivering research informed teaching has received national recognition. Tamara is an industry engaged researcher committed to enhancing local and regional tourism capabilities and is well recognised as a leading educator in tourism and business.



Stephen Wearing is an internationally recognised academic who has published widely in the fields of leisure and tourism authoring over 10 books in the field of leisure and tourism, over 50 refereed papers and a wide range of industry based articles. He is best known for his substantial contributions in ecotourism, community based and volunteer tourism, environmentalism, the sociology of leisure and tourism and the social sciences in protected area management. Stephen has received numerous awards from Industry and Government for his work in the Leisure and Tourism. He is a Fellow and Life Member of Parks and Leisure Australasia, and is a long standing editor of the Parks and Leisure Australasia Journal.



Patricia Johnson is Lecturer and Researcher in the Newcastle Business School. Her research maintains an interdisciplinary and inter-cultural focus in the emerging field of cosmopolitanism and questions relating to cultural literacy and global citizenship. She has substantial experience in undergraduate teaching and her publications are in the fields of Tourism, Leisure and Recreation, Social Science and Cultural Studies. Patricia works with industry and government, she designed and coordinated executive training for the Kenya Public Service Commission and researches in this sector. As coordinator of undergraduate mobility programs she is actively engaged in embedding a sense of global citizenship in undergraduate students by designing and conducting international outbound study

tours (Kenya) and international internships (Global).