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Networking, collaboration, and home brewing: An exploratory study

Abstract

This exploratory study contributes to the academic leisure literature, examining perceived benefits from and barriers to networking and collaboration among home brewers, employing social exchange theory (SET) and the theory of collaboration (TOCL). Sharing basic knowledge of recipes, camaraderie, and mutual support in home brewing activities were main perceived benefits, and lack of time and geographic isolation challenges of networking. Quality improvements, gains in strategic knowledge, and learning alongside others were key beneficial outcomes from collaboration; again, lack of time, and perceptions of giving more than receiving from collaboration were main perceived challenges. Alignments between various tenets of the theories and the findings were revealed, for instance, concerning value, reward, outcome and transaction (SET), stakeholders of a problem domain and interactive process (TOCL). The study will discuss practical and theoretical implications that could be considered in and guide future leisure studies; in addition, new research avenues will be suggested.

Keywords: Home brewing, networking, collaboration, social exchange theory, theory of collaboration, leisure

Introduction

Similar to the emergence of the craft brewing industry in different nations (Cannatelli, Pedrini, & Grum, 2015; McLaughlin, Reid, & Moore, 2014; Reid, McLaughlin, & Moore 2014; Rogerson & Collins, 2015), home brewing is also a leisure activity that is drawing the attention of many adepts. In the United States, for instance, the number of home brewers is estimated to be over 1.2 million (American Homebrewers Association, AHA, 2016). Accompanying this apparent popularity, there has been a consistent growth of home brewing equipment sales. Indeed, the AHA (2014) reported an almost one-fourth increase in equipment sales in 2013; overall, gross revenue grew by 10.3 percent in the same year. More recent reports also confirm that home brewing is growing substantially in the United Kingdom (Clifton, 2016; Wells, 2015), and New Zealand (Hill, 2016). In Australia, where this study's research was carried out, a home brewing community has developed (Oliver, 2012), and today, home brewing attracts many thousands of dedicated individuals (The Courier, 2017).

Home brewing has been defined as a hobbyist or amateur brewing activity, which takes place in non-commercial locations, and for non-sale purposes, such as in a workshop, at home, and/or carried out in social groups in specific locations (Murray, 2009). Home brewing is considered a 'serious leisure' activity (Murray & O'Neill, 2015; Thurnell-Read, 2016). Serious leisure refers to the pursuit of a hobbyist, volunteer, or amateur activity that individuals consider fulfilling, interesting, or substantial to launch themselves on, thereby expressing or acquiring knowledge, experience, or special skills (Stebbins, 2007). Leisure, on the other hand, is conceptualised as "the amount of activities/time spent outside obligated work time and/or engagement in leisure as subjectively defined" (Newman, Tay, & Diener, 2014, p. 559).

Although to a very limited extent, the associations between home brewing, social networks and relationships has been suggested in the literature. First, Olsen, Murphy, and Ro's (2014) research highlights the significance of social groups and connectivity in home brewing, not

only sharing the final product with relatives or friends, but also meeting with other home brewers at events, or when educational opportunities arise. Second, and similarly, Murray and O'Neill (2015) recognise social aspects intrinsically related to home brewing, including the relevance of competitions, product sampling, or club memberships, which are sources of interaction and engagement among brewers. Furthermore, due to scientific and technical reasons, home brewing can be immersive and absorbing for brewers; however, the social aspect of engagement can act as both a satisfier and motivator for participants" (Murray & O'Neill, 2015).

While the above studies highlight the links between home brewing, social exchanges, and social networks, to date, these aspects have not been fully explored in the leisure literature, including among hobby brewers. Similarly, contemporary leisure research has neglected the significance of collaboration within the context of home brewing. Narrowing the knowledge gap regarding these two dimensions could better inform those individuals already engaged or planning future involvement in home brewing. In addition, new knowledge could be insightful for brewing club members, managers and organisers of leisure activities, as well as for researchers.

Added new information on networking and collaboration could identify patterns of behaviour between home brewing and craft brewers, which could also be useful for craft brewing business operators. Indeed, according to Murray and O'Neill (2012), home brewers have helped drive the success of micro brewpubs in the United States. Furthermore, Olsen et al.'s (2014) research findings identify a commercial implication for businesses engaging with members of this group, when they suggest that businesses should provide a social platform, for home brewers to share their craft beer product with others.

This exploratory study will contribute to the leisure literature and to theory in various forms. First, the study examines both networking and collaborating among home brewers based in Australia, where this serious leisure activity has remained under-researched. In particular, the study will investigate the following research questions (RQs):

RQ1: How do home brewers benefit from networking?

RQ2: What are their main perceived barriers to networking?

RQ3: How do they benefit from collaborating?

RQ4: What are their main perceived barriers to collaborating?

Differences between various demographic categories, including participants' age groups, their geographic location, the size of home brewing groups, and benefits from and barriers to networking and collaborating will also be explored.

The findings of this exploratory study, especially those addressing the above questions, will be beneficial for various stakeholders. For example, specific perceived benefits from networking and collaborating could emphasise the importance of engaging in creative, hands-on activities for individuals and members of their community. Overall, participants' perceived benefits could be considered by community development agencies and individuals involved in these organisations, reinforcing and supporting leisure activities to strengthen social ties, nurture self-development and creativity. Similarly, differences in perceptions among participant groups regarding networking and collaborating could also be informative, in identifying strengths or needs of certain groups. Furthermore, the gathered information could

be considered in the planning and development of other leisure activities with similar practical objectives.

The adoption of social exchange theory (Blau, 1986, 1994; Homans, 1958) and the theory of collaboration (Wood & Gray, 1991) represents theoretical contribution of this study. This contribution is illustrated through the examination of the following additional RQs:

RQ5: How do the chosen theoretical frameworks contribute to a greater understanding of

RQ5a: Networking among home brewers?

RQ5b: Collaboration among home brewers?

Networking, collaboration and social exchange

Definitions are very important in the process of theory building (Wacker, 1998; Woods & Gray, 1991); hence, key elements associated with the themes under study will be defined. According to Mandell (2001), practitioners and researchers use network, collaboration and partnership interchangeably, ignoring their differences in many variables, such as relative stability, number of parties involved, and degree of interdependence. To avoid such overlaps, the following paragraphs will present formal definitions of networking and collaboration.

First, Gilmore and Carson (1999) conceptualise networking as “the actual process of liaison with contacts within the network” (p. 31). A network is composed of connections and nodes, whereas a social network is formed by indirect and direct ties, from either one actor, or a collection of actors (Gilmore and Carson, 1999). Furthermore, networking behaviours are defined as individuals’ attempts to establish and maintain relationships with other individuals who can potentially assist them in their career or work (Forret & Dougherty, 2001, 2004). Networking is therefore beneficial, in improving various aspects of individuals’ personal life (Forret & Dougherty, 2004).

Second, among different proposed definitions, Roberts and Bradley (1991) refer to collaboration as “...a temporary social arrangement in which two or more social actors work together toward a singular common end” (p. 212). Thus, collaboration demands the transmutation of ideas, social relations or materials to attain that end (Roberts & Bradley, 1991). Gray (1989) defines collaboration as the process through which groups that identify “different aspects of a problem can constructively... search for solutions that go beyond their own limited vision of what is possible” (p. 5).

In turn, social exchange refers to voluntary actions by people motivated by gains they expect to obtain from others (Blau, 1986); social exchange is therefore associated with relationships that entail future, unspecified obligations (Konovsky & Pugh, 1994). For instance, social exchange may take place when donations are made to gain approval from peers, or to receive expressions of deference and gratitude from recipients (Blau, 1986). Exchange processes utilise self-interest of people “to produce a differentiated social structure within which norms tend to develop” (Blau, 1986, p. 92). These norms require from individuals to prioritise the interests of the collectivity or group, as opposed to their own (Blau, 1986).

Theoretical concepts

In view of their significance to the present research, social exchange theory and the theory of collaboration will be adopted as tools contributing to a more rigorous analysis and a deeper understanding of networking and collaboration among individuals engaged in home brewing.

In the absence of academic literature specifically focusing on networking and collaboration among home brewers, craft brewing research (e.g., McGrath & O'Toole, 2013; Plummer, Telfer, & Hashimoto, 2005; Plummer et al., 2006) will be considered. This decision is also based on the links between home and craft brewing, with Murray and O'Neill's (2012) highlighting the contribution of United States' home brewers in contributing to the success of the micro brewpub sector.

Social exchange theory (SET)

Several associations between networking, social exchange, including the notion of individuals forming relationships with others (Forret & Dougherty, 2001), and motivations to attain gains from such relationships (Blau, 1986) justify the consideration of SET in this research. Uehara (1990) explains that SET has the potential to facilitate understanding of complex relationships among interaction, support, and structure, and "social exchange theorists are fundamentally concerned with the implications of exchange for the solidarity of the group" (p. 524).

Emerson (1976) highlights the vocabulary of SET, which includes cost, reward, value, resource, reinforcement, transaction, outcome, profit, and comparison level. Moreover, SET depicts a cost benefit analysis concerning social interaction; if exchanges are considered beneficial, then individuals will be willing to enter exchange relationships (Dwyer, Hiltz, & Passerini, 2007). An analogy between the vocabulary of SET and craft brewing research can be suggested in the work of Plummer et al. (2005). Indeed, these authors found that forming a group of partnerships between breweries contributed to a variety of positive outcomes. These outcomes ranged from tangible aspects, such as selling more beer, to intangible, including attracting visitors to the region, or instilling a sense of pride among brewery operators.

Conversely, social interaction has emerged strongly in consumer research, with Thomé, Pirangy Soares, and Ventura Moura (2017) identifying three predominant types of young beer consumers: the inductor, the induced, and the sophisticated beer consumer. The inductor can influence beer consumption through his/her opinions; in contrast, the induced can be persuaded to consume a particular beer brand by others' opinions. Furthermore, the sophisticated type is not influenced by- and does not take- other individuals' opinions when choosing a beer brand (Thomé et al., 2017). Importantly, these findings suggest that beer consumption activities within the induced consumer type are based on social relations characterised by very strong ties.

Some of the statements of SET (Homans, 1958) indicate that social behaviour consists of an exchange of both non-material and material goods, as symbols of prestige and approval. Thus, SET describes interpersonal interactions in terms of reciprocity of reward and resource (Hu and Kettinger, 2008). Individuals giving considerably to others also try to receive much from them, and those receiving substantially are under pressure to reciprocate (Homans, 1958). This process of influences eventually reaches a point of equilibrium, whereby exchanges balance out. Homans (1958) explains that, for individuals engaged in exchanges, what they give may cost them, just as what they receive may be a reward, and their behaviour changes less as profits or rewards less costs tend to be maximised.

A further illustration from craft beer tourism research complements some of Homans's (1958) points. In fact, Plummer et al. (2006) highlighted the complexity partnerships face that can breed conflict, and even lead to the demise of a previously successful beer trail. Such complexity can result from broad competing interests, which, due to the apparent rapid

success of partnerships and business, are suggested to result in limited appreciation and reflection of existing collaborative efforts (Plummer et al., 2006). Without these key elements, partners may seek benefits more individually, as opposed to by collaborating with one another.

Because there are no legal obligations to return any benefits received, initially, new acquaintances must “prove themselves trustworthy in social exchange” (Blau, 1994, p. 155). This situation is initiated through a slow process involving exchange relationships, predominantly minor transactions that entail or demand little risk and trust (Blau, 1994). Mutual discharge of reciprocation and obligations can benefit both parties, and, as favours are repeatedly reciprocated between them, trustworthiness increases (Blau, 1994). Some of these notions are strongly associated with research conducted among craft brewers, many of whom had a background in home brewing (McGrath & O’Toole, 2013), which underscores factors enabling the development of network capability. Among these factors, McGrath and O’Toole (2013) revealed the creation of opportunities through relationships, a stronger sense of community, and benefits from information sharing.

The theory of collaboration (TOCL)

The significance of collaborative relationships in the craft-brewing sector (e.g., Plummer et al., 2005, 2006) also supports the adoption of the TOCL in this study. In one of the most prominent studies seeking to develop the theory, Wood and Gray (1991) propose a refinement of Gray’s (1989) definition of collaboration. This refinement postulates that collaboration takes place “when a group of autonomous stakeholders of a problem domain” (p. 146) become involved in interactive processes, using shared norms, structures, and rules, to decide or act on issues associated with the domain. Wood and Gray (1991) divide the above-refined definition into several parts:

Stakeholders of a problem domain are represented by organisations or groups with vested interests in the problem domain. At the start of a collaborative relationship, these groups may have differing or common interests; as collaboration continues, these interests may be redefined or may change (Wood & Gray, 1991). In the case of home brewers, the problem domain is illustrated by their passion in engaging in their leisure activity, an extension of which is the ultimate goal to create a quality product that can be enjoyed with other brewers, friends, and family members.

Autonomy is crucial for understanding collaboration. Indeed, stakeholders maintain “independent decision-making powers” (Wood & Gray, 1991, p. 146), also when they commit to abide by common rules in their collaborative pursuits. While arguably many home brewers socialise or network with other individuals sharing similar interests, ultimately they follow their individual desires or personalised ways to brew their products. This notion is supported by research in the craft brewing industry (Bruski, 2014), where the design of many craft beer labels highlights an individualistic tradition, as well as individual creativity.

Interactive process, which refers to an existing “change-oriented relationship of some duration” (Wood & Gray, 1991, p. 148), and assumes the involvement of all participants in that relationship. This process exists among home brewers, for instance, as members of a brewing club, or through team brewing efforts. Similarly, in the craft-brewing sector, Plummer et al. (2005) identified the significance of interactive processes in helping develop a sustainable beer trail.

In addition, Maciel and Wallendorf (2012) used the analogy of home brewers to emphasise the significance of ‘productive consumers’. Moreover, one characteristic of this group is “to conspicuously display their work-like leisure and its handmade output to demonstrate distinctiveness” (p. 644). For example, home brewers may take their leisure activity beyond domestic production, and consider public settings, including brewing clubs. During this interaction process, they may receive recognition for their creativity that would otherwise be rare in their jobs (Maciel and Wallendorf, 2012).

Shared rules, norms, and structures may be implicit in collaborative relationships “when participants already share a negotiated order” (Wood & Gray, 1991, p. 148). Frequently, however, participating stakeholders will have to agree on the norms and rules governing interactive processes. While arguably an informal protocol, home brewers collaborating and networking with one another may have implicit ground rules they need to adhere by. Such principles and structures may also apply among craft brewers. For instance, McGrath and O’Toole (2013) mentioned participation of brewers in various coordinated events, or developing marketing systems with retailers, all of which entail the development of structures, norms and rules to adhere to.

Action or decision is required from participants, especially given that achieving objectives is a desired aim from collaborating; indeed, collaboration merely exists as long as- or if- stakeholders engage in processes directed toward decision or action (Wood & Gray, 1991).

Domain orientation suggests that participants should aim or consider their decisions, actions, and processes towards matters associated with the problem domain that was an initial reason to bring them together as a group.

Outcomes become apparent from the different ways toward which participants direct or manage collaboration efforts (Wood & Gray, 1991).

These last three elements also are associated with the contemporary craft brewing and leisure literature. For example, in the case of craft beer trail development (Plummer et al., 2005), collaboration was perceived in terms of having formal and informal links (action or decision). Furthermore, domain orientation and outcomes were evident in the establishment of the Ale trail, and by referring visitors to the different breweries, respectively. In the case of home brewers, action or decision may be reflected through brewing beer collaboratively as a group, or in a beer club. Domain orientation is suggested as the activity of brewing, which may involve more than producing craft beer, to include camaraderie, socialising, and learning/sharing. The final product (beer), improvements (quality, processes), and the strengthening of ties among home brewers are part of the outcomes.

Domain orientation and outcomes are also implicitly suggested by Rodgers and Taves (2017), when they underline the establishment of regional and national networks among United States’ home brewers, which facilitates a certain level “of consistency in knowledge practices” (p. 132). Moreover, both home and microbrewer groups are connected to a wider beer brewing culture, which overtime has evolved into a collaborative, multiorganised, “and systematic shared web of knowledge” (p. 128).

Despite the potential of both SET and TOCL, these theoretical frameworks have been only sporadically adopted in contemporary leisure research, and less so to study such serious leisure pursuits as home brewing. The present research makes an important practical and theoretical contribution, examining networking and collaboration among home brewers, employing SET and the TOCL.

Methods

The main objective of this study is to investigate the benefits from and the barriers to networking and collaboration among home brewers through the lens of SET and the TOCL. The study therefore contributes empirically and theoretically to the leisure literature, first, by examining home brewers, and second, by adopting the above theoretical frameworks and by proposing a refinement in the context of home brewing. Apart from two very recent studies conducted in the United States (Murray & O'Neill, 2015) and the United Kingdom (Thurnell-Read, 2016), home brewing has received very limited attention from the leisure literature. The present research provides a component of originality, by focusing on home brewers engaged in this activity in Australia. To date, while few sources (Oliver, 2012; The Courier, 2017) have identified the growth in popularity of home brewing in Australia, academic studies focusing on this serious leisure activity in this country are inexistent.

The study is structured around deductive reasoning, or drawing conclusions from logical steps of reasoning, whereby these steps follow from the previous (Ennis, 1969; Simon, 1996). According to Clark (1969), the identifiable stages of deductive reasoning are: a) comprehending the propositions, and b) the question, c) searching for information to address the question, and d) producing an answer.

In seeking information to address the different research questions, the research team considered various avenues to gather data. One fundamental avenue was represented by the practical knowledge of home brewing of one of the authors, together with years of involvement with home brewing clubs and their members. These key resources, coupled with this author's extensive visitation of home brewing and craft brewing events, facilitated the identification of six home brewing clubs in Australia. These clubs were contacted by email correspondence in April of 2015. The message informed the clubs' management of the objectives of the research, and asked for their support in the data gathering process. While no access was granted to contact club members directly, the clubs' representatives agreed to disseminate a URL link among their membership; this link would direct them to an online questionnaire.

The decision to employ an online questionnaire to gather data was mainly based on the significant barriers to identify individual home brewers, including home brewing club members. In addition, financial, logistic, time and other challenges limited travel to various Australian states to interview unidentifiable home brewers, thus, preventing the research team from utilising other forms of data collection.

For this study, the questionnaire was divided into various sections, with the first focusing on participants' demographic information, such as age group, main occupation, or state of residence (Table 1). Section two (Table 2) sought to collect information of home brewing involvement, including approximate yearly craft beer production, years of involvement in home brewing, and number of individuals participants home brewed with. Section three (Table 3) investigated perceived benefits from and challenges to networking, and section four

(Table 5) perceived benefits from and challenges to collaborating. Both sections employed a Likert-type scale, where participants were provided a battery of items, and were prompted to indicate their level of agreement from the following five points: 1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree. Thus, in this study, level of agreement is defined as a 4.0 in the provided Likert-type scale.

In addition to considering various theoretical contributions (e.g., Blau, 1986, 1994; Homans, 1958; Wood & Gray, 1991), other sources that empirically investigate alliances, networking, cooperation and collaboration in various contexts. For example, studies focusing on the craft brewing and wine industries were consulted (Duarte Alonso, 2011; Lewis, Byrom, & Grimmer; 2015; Plummer et al., 2006, 2005; Somogyi et al., 2010; Taplin, 2010; Wargenau & Che, 2006). The decision to consider these sources, which primarily examine the above themes from an entrepreneurial/business perspective, was partly due to the lack of studies investigating both networking and collaboration among home brewers. In addition, space was provided at the end of these sections for participants to add comments, which complemented the quantitative data gathered in the scaled items (Table 3, 5).

The online questionnaire remained open between April and June of 2015; during this time, three reminders were sent to the clubs. These efforts resulted in gathering 219 useable responses. Given that members' information was maintained confidential, numbers of all contacted individuals (home brewers) were not released; therefore, no precise response rates could be calculated.

In analysing the predominantly quantitative data, one-way analysis of variance (ANOVA, Scheffé post hoc) was perceived as the most efficient way to 'construct the answer' (Clark, 1969). Thus, Scheffé post hoc was used to test statistically significant relationships between three or more variables from the demographic data and the scaled items (Table 2, 3). In the following sections, selected comments are unidentifiable and abbreviated, for instance, Participant 1: P1, and Participant 2: P2; these comments also significantly contributed to the deductive reasoning adopted in the study, namely, constructing answers.

Demographic results: brewers and participants

As illustrated in Table 1, nearly three-fourths (72.6%) of participants were 45 years old or younger, and almost all were males. The findings also suggest that, financially, the professions of the majority of participants allow them to support their home brewing hobby, including purchasing equipment or ingredients. An unbalanced geographic distribution of home brewers was noticed, with over 70 percent being located in the states of Victoria and Western Australia.

Table 1 Here

Results

Most participants indicated home brewing in capital cities (Table 2). An almost equal split was noticed regarding the time since participants became involved in home brewing, with 47.5 percent indicating brewing for five years or less, and the rest (52.5%) at least for five years. Nearly 60 percent of participants brewed less than 400 litres per year. Predominantly, home brewing was perceived as a social or group activity, with 57.5 percent brewing with one or more individuals, and 11.9 percent with six or more. Social friends, followed by brew club and family members were the most preferred groups participants chose for their home

brewing activities. These findings confirm strong associations between home brewing and different forms of networking.

Table 2 Here

RQ1, RQ2: Networking, benefits and barriers

Participants' responses clearly demonstrated agreement with the items designed to identify main perceived benefits from networking (Table 3). Indeed, such agreement was reflected in six of the nine items, which underline the importance of social networking among home brewers. Partly related to this finding, earlier research conducted among small business operators (Miller, Besser, & Malshe, 2007) revealed that a social capital construct, shared vision, together with trust, was one key benefit from networking. In fact, sharing knowledge of recipes, camaraderie, the feeling of being able to rely on networks, and openness of communication were areas in which participants agreed most strongly. However, while the level of agreement was not reached, other areas also emerged as significant or close to the agreement level, for instance, tangible benefits, such as sharing supplies, knowledge, and increasing the network of home brewers. The space provided in this part of the questionnaire elicited various comments, with the following selection highlighting intangible benefits, such as socialising, reciprocation, mutual support, or opportunities to learn, with clear implications for home brewing outcomes:

Table 3 Here

P1: The home brewing scene and brewing industry (I dare to say worldwide) is extremely social, supportive and open. It accepts new members without bias and everybody assists each other and provide support. Brewers learn to be open and sharing with [sic] recipes, ingredients and equipment.

P2: Spread and share knowledge and enthusiasm within the beer networks, but also to members of the wider community.

P3: Being in a group with a wide variety of ages, knowledge, experience and passions increases the chance of being able to improve with each brew.

P4: ...networking [with] others that are involved in craft brewing helps my limited knowledge grow, which hopefully transfers to making better beer...

P5: Brewing and sharing beer is a good opportunity to socialise with like-minded people.

In contrast, apart from lack of time to develop networks, all other means concerning challenges of networking were well below the neutral level (mean=3.00). In addition, only few comments, including the following, were provided, which further suggests that benefits significantly outweighed any perceived challenges:

P6: The stigma attached to brewing... a brewer that is drinking all day, every day, and makes strong beers just so they can get drunk.

P7: Legislative frameworks prohibit us sharing our craft with the general public...

Testing the internal reliability of the nine items pertaining to perceived benefits, and the six of perceived challenges in networking resulted in a Cronbach's Alpha of .846, and .759, respectively, thus, confirming the appropriateness of conducting statistical tests (Table 4). Statistically significant differences were primarily noticed based on participants' geographic

location and the number of people involved in home brewing activities. Those individuals living or home brewing in regional centres clearly agreed less than the other two groups concerning benefits related to collegiality, camaraderie and networking. In all three items, the group living in capital cities agreed more. In contrast, and despite the low means, participants living in regional centres agreed more with the fear of sharing information as a barrier to networking, while, as expected, the group living in rural areas agreed more with geographic isolation as a barrier to networking (Table 4).

Table 4 Here

A pattern was identified, in that, the larger the group of home brewers, the stronger was the agreement with various perceived benefits. Such was the case of the largest group of six or more home brewers, who clearly agreed more than the other groups with regard to sharing intangible (knowledge of recipes), and tangible (equipment) resources, and increasing contacts. Regarding these results, Miller et al. (2007) found that sharing resources, for instance, information about technology, suppliers, and new techniques, was a key additional benefit from networking for small business owners. In a further case, the group composed of one to five individuals agreed more with the feeling of having colleagues when needed (Table 4). In this case, however, all three groups indicated level of agreement. In contrast, the group of individual home brewers agreed more with the lack of perceived benefits as a barrier to networking.

RQ3, RQ4: Collaboration, benefits and barriers

Perceived benefits from collaboration primarily emerged in terms of improvements in the craft beer product, for instance, increasing quality, gaining strategic knowledge, hands-on experience by practicing with others, and broadening the range of craft beer varieties (Table 5). Near the level of agreement (mean=4.00), participants also perceived that collaboration contributed to strategic knowledge gains, namely, of what other home brewers did internationally. In turn, and in contrast to the perceived benefits from networking (Table 3), gaining basic knowledge was modestly valued. This finding suggests that, mainly, basic knowledge of home brewing may occur at the earlier stages of networking. Once higher levels of networking- and collaboration- occur, basic knowledge may no longer apply, and instead, higher quality and knowledge levels are key objectives of networks and collaborative efforts (Table 5). This notion was partly supported by some of the following verbatim comments:

P8: Collaborative brewing is highly regarded in the home brew scene and within the commercial brewing industry. It exposes everybody to an increased level of quality and availability of ingredients etc. It gives you an opportunity to expand your knowledge. Two heads are better than one!

P9: The ability to make beers collaboratively that I would not be able to [make] on my own...

P10: Learning how to evaluate beer properly. Learning process improvements. Learning more technical aspects...

P11: Engineering tips and designs for homebrew equipment...

Table 5 Here

Aligned with these comments, wine research (Aylward, Glynn, & Gibson, 2006) revealed the importance of firm collaboration in various innovative practices, including marketing and

research, with wineries often collaborating with one another to use research. Another study in the wine industry (Duarte Alonso, 2011) identified additional benefits, such as exchanging ideas and reciprocal promotion. Finally, the significance of friendships was also emphasised (P12): “*Build stronger relationships with other families*”, and financial benefits (P13): “*Cheaper ingredients through group buying.*”

As had been the case concerning perceived challenges to networking, almost all scaled items attained a mark below ‘neutral’ (mean=3.00). Lack of time to develop collaborative relationships, feelings of unfairness, in that participants claimed that others benefitted more than they did from collaborating, and geographic isolation were the three highest ranked items reflecting barriers to collaborating. Verifying the internal reliability of the scaled items confirmed a Cronbach’s Alpha of .784 (perceived benefits from collaborating) and .797 (perceived challenges to collaboration), which supported further analysis. Subsequently, various statistically significant differences emerged by running Scheffé post-hoc. As illustrated (Table 6), the size of the group involved in home brewing was a fundamental factor in the perception of benefits from collaborating. Indeed, in all but one case, the group composed of six or more people clearly agreed more than the smaller group (between one and five), and the individual home brewers. These differences were most obvious regarding the perceived importance of learning more through involvement with other home brewers, increasing the variety of styles in one’s beer selection, or in sharing hardware/supplies. The learning element is also reflected in one recent academic contribution investigating home brewers (Olsen et al., (2014). In fact, while fun, enjoyment, excitement and personal development constituted home brewers’ key intrinsic motivational factors, learning opportunities was the extrinsic motivational factor they most agreed with (Olsen et al., 2014).

In contrast and somewhat expected, the group composed of home brewers conducting their leisure activity individually perceived some barriers to collaboration more strongly than the other groups. Perceived lack of gaining benefits from collaboration, unwillingness to work collaboratively for fear of disclosing home brewing information, and lack of resources were perceived more strongly as reasons for not collaborating.

Table 6 Here

Discussion

Both the SET and the TOCL emerged as useful theoretical frameworks to study and develop understanding of networking and collaboration in home brewing activities. The following sections will discuss the alignments between theory and findings; this discussion will be supported by a refinement of both theories in the context of home brewing (Figure 1).

RQ5a: Extent of applicability of SET

The items related to the perceived benefits from networking that were ranked within the level of agreement (Table 3) clearly emphasise the behavioural dimension of exchanges. These items are also closely aligned with Emerson’s (1976) suggested vocabulary of SET, with reward, value, transaction, or outcome emerging from home brewers’ networking activities. First, sharing basic knowledge of home brewing, such as recipes, tools, or equipment, strongly aligns with the above elements of Emerson’s (1976) vocabulary. Sharing knowledge is also aligned with Blau’s (1994) view that, initially, new acquaintances engage in minor transactions that entail limited trust and limited risk.

Sharing strategic knowledge of what home brewers do at a national or international level, and sharing hardware/supplies, which scored near the agreement level, also imply perceived value, reward, and transaction (Emerson, 1976). However, these three items also suggest that the level of trust and risk Blau (1994) refers to is much higher; hence, an argument is made that, to qualify for these transactions, network development requires various stages of exchanges for trustworthiness to build, and for perceived risk to decrease.

Second, camaraderie, one of the benefits participants most agreed with, provides a feeling of being associated with or belonging to a group, healthy relationships, and intrinsic fulfilment. As implied by Dwyer et al. (2007), before becoming involved in these networks, participants may reflect on the potential costs and the benefits from such relationships. Blau's (1994) point of initially committing to the reciprocal relationship in a limited way also applies to this situation, as camaraderie may entail mutual support, interaction and solidarity (Uehara, 1990) primarily. Third, the feeling of being able to rely on networks to make improvements further underscores Emerson's (1976) notion of value, reward and outcome participants perceived from networking relationships.

Fourth, openness in communication, and the feeling of having colleagues that could be contacted, either to make improvements, or even as a moral/emotional support, are in line with Blau (1994), in that such elements may help build trustworthiness between both parties. Importantly, while perceived gains from networking were clearly indicated by participants, an assumption could be made regarding their home brewing colleagues, who may equally expect or consider some form of reciprocation. Thus, the notion of 'giving much to others' (Homans 1958) fits in this context of expected gains, with both parties expecting to balance out or reach an equilibrium in their transactions.

Figure 1 Here

RQ5b: Extent of applicability of TOCL

The results (Table 5) also revealed several associations with the TOCL, and more precisely, with the elements proposed by Wood and Gray (1991). First, the characteristics of home brewing undoubtedly emphasise the importance of collaborating in producing quality and variety of beers. Such importance is reflected in home brewers' involvement sampling beers or participating in home brewing competitions (Murray & O'Neill, 2015) to showcase their craft beers. These characteristics strongly suggest that improvement, for instance, of knowledge, techniques and practices, ultimately leading to the final product, is one key aspect illustrating home brewers' 'problem domain' (Wood & Gray, 1991).

The fact that participants' agreement is strongest with regard to increasing the quality of beer as a beneficial outcome of collaboration implies an alignment with Wood and Gray's (1991) proposition, namely, regarding the existence of common interests with other home brewers. Stakeholders of a problem domain is also confirmed in other items (Table 5) that highlight ways in which the final beer product could be influenced. Such is the case of gaining strategic knowledge of what other home brewers do nationally and internationally, learning by brewing beer with other home brewers, or increasing the range of styles of beer selection, which may also contribute to learning and skill improvement.

At the same time, while home brewers may collaborate in various forms to make improvements in their beer, and therefore have a more fulfilling home brewing experience,

the ultimate decision on quality may be taken autonomously or independently. This autonomy could be reflected in home brewers' direct involvement in the brewing process. The items of Table 5 indicating home brewers' agreement with aspects associated with the benefits from collaborating also underscore the role of interactive processes, illustrated in participants' involvement (Wood & Gray, 1991).

Further, the shared norms and rules referred to by Wood and Gray (1991) could be interpreted in terms of principles of social interactions with other home brewers, and following a 'script' or basic principles during the process of home brewing. Similarly, the first six items in Table 5 also align with the elements of action or decision, implying focus on objectives. Alignment is also revealed regarding domain orientation, which emphasises actions or processes related to the problem domain that initially triggered collaborative relationships among home brewers, for instance, leisure, goals of improving brewing, higher beer quality, and increased beer variety. Finally, outcomes are reflected in the different ways in which collaboration among home brewers is directed, again, focusing on improving beer quality. Together with social exchanges, these outcomes contribute to creating more memorable and more rewarding home brewing experiences.

Conclusions

Despite the importance of home brewing highlighted in different reports (Clifton, 2016; Hill, 2016, Wells, 2015), apart from very few recent contributions (Murray and O'Neill 2015; Thurnell-Read 2016), to date, this serious leisure activity has been explored to a very limited extent. This exploratory study sought to narrow the existing knowledge gap, and contribute to the leisure literature, examining Australian home brewers' perceived benefits from and barriers to networking and collaborating. In doing so, the SET and the TOCL were employed. Sharing resources, camaraderie, and socialising emerged as participants' main perceived benefits from networking, while lack of time was only modestly recognised as a limitation. In addition, making improvements in various fronts, especially in quality, learning more about brewing by practicing with other home brewers, or gaining strategic knowledge of what home brewers did elsewhere (nationally, internationally) were key perceived benefits from collaboration.

Several statistically significant differences were revealed. For instance, those participants living in capital states agreed significantly more with benefits from networking in the form of camaraderie, and with feelings of having colleagues they could contact when needed than did their counterparts. Differences were also apparent concerning collaboration, with home brewing groups of six or more people clearly agreeing more with making gains in quality, and increasing the number of beer styles than did those brewing in smaller groups.

Various links between the two predominant themes under investigation (networking and collaboration) and the adopted theoretical frameworks were identified. These links constitute an important theoretical contribution of the present research. For example, perceived benefits of sharing basic knowledge of home brewing aligned with transaction, value, and outcome (Emerson, 1976), and with the notion of low risk and trust that characterise transactions between new acquaintances (Blau, 1994). In addition, participants' perceived benefits from collaboration, especially through quality improvements and increased strategic knowledge, primarily associated with 'stakeholders of a problem domain' (Wood & Gray, 1991). Interactive processes, with home brewer meetings to collaborate; shared norms and rules, following principles and processes of home brewing; domain orientation, focusing on both

improvements and purposes of collaboration; and outcomes, which relate to the ultimate goals of collaborative efforts, were additional alignments with Wood and Gray's (1991) contribution.

Implications

From a practical standpoint, the findings emphasise the significance of social networks and collaborating in one form of serious leisure. Moreover, while many individuals prefer to be involved in home brewing alone, without any other companionship, the implications for those engaging with other individuals are very clear. Benefits, including improved learning skills and knowledge while building camaraderie, personal relationships, emotional and other forms of support (e.g., feelings of having colleagues home brewers can rely on) further underline the importance of these social exchanges. The perceived benefits through collaborating efforts have implications for this leisure activity, namely, in the form of perceived quality and variety of craft beer products, and further reinforce those benefits accrued through social networks.

Based on the study's findings, a suggestion is made that, through networking and collaboration, both tangible and intangible rewards could also be achieved in other leisure activities. For instance, networking and collaboration could be very beneficial in leisure pursuits where participants compare or comment on each other's work. Such is the case in the domain of arts (patchwork, painting), food preparation (cooking, baking), or tool-building (carpentry). The networking and collaborative attitudes among practitioners could help fellow participants, as well as other individuals of various age groups (senior, young adults) and from different walks of life develop their hands-on or communication skills. Importantly, these experiences, both by those providing, promoting, exchanging or even receiving support and knowledge could lead to various significant intrinsic rewards, including personal fulfilment, self-reliance, confidence and empathy.

The findings also highlight theoretical implications. With regard to SET, and in line with Blau (1994), while more commitment to networking and social exchanges entails higher levels of risk and trust, as illustrated in the findings (e.g., Table 3), these exchanges could also lead to rewarding experiences. The opposite, only maintaining social networks, without any ambition or predisposition to grow, may not produce significant results or benefits for either party. Further, even when reciprocity (Homans, 1958; Hu & Kettinger, 2008) among home brewers is a continuous process, which may not reach a point of saturation or equilibrium, it symbolises engagement and a willingness to contribute to relationship-building and personal growth. In this context of higher commitments, higher risk and more trust, reciprocal exchanges, and group solidarity (Uehara, 1990), SET provides a clear path to understand potential outcomes of social relationships in leisure pursuits.

Similarly, the different elements pertaining to the TOCL, such as stakeholders of a problem domain, interactive processes, action or decision, domain orientation and outcomes (Wood & Gray, 1991) provide a structure, which facilitates the understanding of associations between improvements and involvement in leisure. For instance, domain orientation underlines the significance for home brewers involved in collaborative efforts to direct their actions, processes, and decisions and address issues related to the 'problem domain' (Wood & Gray, 1991). Such orientation implies a group effort that, if well coordinated, could be critical in making improvements, again, resulting in more memorable leisure experiences.

Limitations and Future Research

While this exploratory study provided first-hand empirical results of an under-explored leisure activity, several limitations must be recognised. Fundamentally, given the confidential nature of the study, in that the questionnaire link was disseminated by home brewing club representatives, determining the response rate percentage was not possible. Second, the bulk of responses originated from two states; such over-representation prevented from making inter-state comparisons. Third, and similarly, in the absence of data collected both among home brewers in Australia and elsewhere, no country comparisons or analyses could be undertaken.

Future research could address some of the above limitations. For example, researchers could seek the support of home brewer clubs from various nations and gather data that would allow them to make country comparisons. Furthermore, future research could also include unstructured, in-depth, face-to-face interviews with home brewing club representatives; the experience and knowledge of these individuals could be very useful, complementing and enriching the content of the data collected through questionnaires. The further application of SET and the TOCL could also be a powerful element in future research conducted within the domain of home brewing or similar activities (e.g., hobby cooking, hobby baking). Employing these theoretical frameworks could also allow for confirming or disconfirming their impact and usefulness in this study, as well as contribute to their further refinement and development.

References

- AHA (2016). *About the AHA*. Retrieved from <https://www.homebrewersassociation.org/>
- AHA (2014). *American Homebrewers Association: Homebrew sales hop 10 percent in 2013*. Retrieved from https://www.brewersassociation.org/press-releases/shopsurvey_2014/
- Aylward, D., Glynn, J., & Gibson, B. (2006). SME innovation within the Australian wine industry: A cluster analysis. *Small Enterprise Research*, 14(1), 42-54.
- Blau, P.M. (1986). *Exchange and power in social life*. New Jersey, Transaction Publishers.
- Blau, P.M. (1994). *Structural contexts of opportunities*. Chicago, IL: University of Chicago Press.
- Bruski, P.R. (2014). Reflections of tradition and innovation: An exploration of brewer's iconography. Proceedings of the Popular Culture Association / American Culture Association Conference, Chicago, Beer Culture, April 16-19, 2014; Chicago, IL.
- Cannatelli, B., Pedrini, M., & Grumo, M. (2015). The effect of brand management and product quality on firm performance: The Italian craft brewing sector. *Journal of Food Products Marketing*, forthcoming.
- Clark, H.H. (1969). Linguistic processes in deductive reasoning. *Psychological Review*, 76(4), 387-404.
- Clifton, K. (2016). *Homebrew shop moves into bigger premises – as craze gains popularity*. Nottingham Post online. Retrieved from <http://www.nottinghampost.com/cheers-home-ales-head-boomtime/story-28564169-detail/story.html>
- Duarte Alonso, A. (2011). “Standing alone you can't win anything”: The importance of collaborative relationships for wineries producing muscadine wines. *Journal of Wine Research*, 22(1), 43-55.
- Dwyer, C., Hiltz, S., & Passerini, K. (2007). *Trust and privacy concerns within social networking sites: A comparison of Facebook and MySpace*. Proceedings of the 13th Americas Conference on Information Systems, August 9–12, Keystone, CO.

- Emerson, R.M. (1976). Social exchange theory. *Annual Review of Sociology*, 2, 335-362.
- Ennis, R. (1969). *Logic in teaching*, Prentice Hall, Englewood Cliffs, NJ.
- Forret, M.L., & Dougherty, T.W. (2004). Networking behaviors and career outcomes: differences for men and women? *Journal of Organizational Behavior*, 25(3), 419-437.
- Forret, M.L., & Dougherty, T.W. (2001). Correlates of networking behavior for managerial and professional employees. *Group and Organization Management*, 26(3), 283-311.
- Gadja, R. (2004). Utilizing collaboration theory to evaluate strategic alliances. *American Journal of Evaluation*, 25(1), 65-77.
- Gilmore, A., & Carson, D. (1999). Entrepreneurial marketing by networking. *New England Journal of Entrepreneurship*, 2(2), 31-38.
- Gray, B. (1989). *Collaborating: Finding common ground for multiparty problems*. San Francisco, CA: Jossey Bass.
- Hill, M. (2016). *Home brewing popularity soars*. Stuff online. Retrieved from <http://www.stuff.co.nz/life-style/food-wine/drinks/78267931/Home-brewing-popularity-soars>
- Homans, G.C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63(6), 597-606.
- Hu, T., & Kettinger, W.J. (2008). *Why people continue to use social networking services: developing a comprehensive model*. Proceedings from the International Conference on Information Systems (ICIS), Paris, France, 14-17 December.
- Konovsky, M.A., & Pugh, S.D. (1994). Citizenship behavior and social exchange. *Academy of Management Journal*, 37(3), 656-669.
- Lewis, G.K., Byrom, J., & Grimmer, M. (2015). Collaborative marketing in a premium wine region: the role of horizontal networks. *International Journal of Wine Business Research*, 27(3), 203-219.
- Maciel, A.F., & Wallendorf, M. (2012). Leisure consumption as conspicuous work. *NA-Advances in Consumer Research*, Volume 40.
- Mandell, M.P. (2001). Collaboration through network structures for community building efforts. *National Civic Review*, 90(3), 279-288.
- McLaughlin, R., Reid, N., & Moore, M. (2014). The ubiquity of good taste: A spatial analysis of the craft brewing industry in the United States. In M. Patterson, and N. Hoalst-Pullen (Eds.), *The Geography of Beer: Regions, Environment, and Societies* (pp. 131-154). New York, NY: Springer.
- Miller, N.J., Besser, T., & Malshe, A. (2007). Strategic networking among small businesses in small US communities. *International Small Business Journal*, 25(6), 631-665.
- Murray, D.W. (2009). *Home brewing and serious leisure an empirical evaluation*. Unpublished doctoral thesis. Auburn University, Alabama.
- Murray, D.W., & O'Neill, M.A. (2015). Home brewing and serious leisure: exploring the motivation to engage and the resultant satisfaction derived through participation. *World Leisure Journal*, 57(4), 284-296.
- Newman, D.B., Tay, L., & Diener, E. (2014). Leisure and subjective well-being: A model of psychological mechanisms as mediating factors. *Journal of Happiness Studies*, 15(3), 555-578.
- Oliver, G. (2012). *The Oxford Companion to Beer*. New York, NY: Oxford University Press.
- Olson, E. D., Murphy, K. S., & Ro, H. (2014). An exploratory study of home brewers' motivational factors. *Journal of Foodservice Business Research*, 17(3), 228-241.
- Plummer, R., Telfer, D., & Hashimoto, A. (2006). The rise and fall of the Waterloo-Wellington Ale Trail: A study of collaboration within the tourism industry. *Current Issues in Tourism*, 9(3), 191.

- Plummer, R., Telfer, D., Hashimoto, A., & Summers, R. (2005). Beer tourism in Canada along the Waterloo–Wellington ale trail. *Tourism Management*, 26 (3), 447-458.
- Reid, N., McLaughlin, R.B., & Moore, M.S. (2014). From yellow fizz to big biz: American craft beer comes of age. *Focus on Geography*, 57(3), 114-125.
- Roberts, N.C., & Bradley, R.T. (1991). Stakeholder collaboration and innovation: A study of public policy initiation at the state level. *The Journal of Applied Behavioral Science*, 27(2), 209-227.
- Rodgers, D.M., & Taves, R. (2017). The epistemic culture of homebrewers and microbrewers. *Sociological Spectrum*, forthcoming.
- Rogerson, C.M., & Collins, K.G.E. (2015). Developing beer tourism in South Africa: international perspectives. *African Journal of Hospitality, Tourism and Leisure*, 4(1), 1-15.
- Simon, M.A. (1996). Beyond inductive and deductive reasoning: The search for a sense of knowing. *Educational Studies in Mathematics*, 30(2), 197-210.
- Somogyi, S., Gyau, A., Li, E., & Bruwer, J. (2010). Enhancing long-term grape grower/winery relationships in the Australian wine industry. *International Journal of Wine Business Research*, 22(1), 27-41.
- Stebbins, R. (2007). *Serious leisure: A perspective for our time*. New Brunswick, NJ: Transaction Publishers.
- Taplin, I.M. (2010). From co-operation to competition: market transformation among elite Napa Valley wine producers. *International Journal of Wine Business Research*, 22(1), 6-26.
- The Courier (2017). Narrabri to host huge home brewing event. The Courier online. Retrieved from <http://www.thecourier.net.au/news/narrabri-to-host-huge-home-brewing-event/>
- Thomé, K., Soares, A.P., & Moura, J.V. (2017). Social interaction and beer consumption. *Journal of Food Products Marketing*, 23(2), 186-208.
- Thurnell-Read, T. (2016) ‘Real Ale’ enthusiasts, serious leisure and the costs of getting ‘too serious’ about beer. *Leisure Sciences*, 38(1), 68-84.
- Uehara, E. (1990). Dual exchange theory, social networks, and informal social support. *American Journal of Sociology*, 96(3), 521-557.
- Wacker, J.G. (1998). A definition of theory: research guidelines for different theory-building research methods in operations management. *Journal of Operations Management*, 16(4), 361-385.
- Wargenau, A., & Che, D. (2006). Wine tourism development and marketing strategies in Southwest Michigan. *International Journal of Wine Marketing*, 18(1), 45-60.
- Wells, J. (2015). How Britain became hooked on homebrew. The Telegraph online. Retrieved from <http://www.telegraph.co.uk/men/the-filter/11803139/How-Britain-became-hooked-on-homebrew.html>
- Wood, D.J., & Gray, B. (1991). Toward a comprehensive theory of collaboration. *The Journal of Applied Behavioral Science*, 27(2), 139-162.