

The co-creation of consumer value within online health communities

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THESIS ABSTRACT

The past two decades have seen a rapid increase in consumer-generated content shared on the internet through social media. Health, traditionally seen as a private matter between doctor and patient, is no exception. Today's health consumers share these private matters with a global network of other health consumers, co-creating a level of health and treatment expertise in the process. Marketing scholarship reveals the utilitarian and social value of consumer-led communities built up around brands, topics of interest and professional practice, but surprisingly little scholarship investigates such communities in a health context. This thesis is a study of the different types of value co-created and experienced by consumers who participate in online health communities, exchanging health information and sharing support with strangers they are never likely to meet.

Paper 1 is a review of literature pertaining to consumer value. This paper considers typologies of consumer value and argues that none adequately recognises value consumers perceive from social engagement within collective consumption experiences. The term "network value" is introduced to describe value perceived by consumers specific to consumption experiences embedded within a social context. Paper 2 presents a qualitative study of an online health community, identifying practices employed by participants to create and maintain social capital. This netnographic study includes analysis of posts to an online community for sufferers of Inflammatory Bowel Disease (IBD) as well as online interviews with participants, and reveals types of consumer

value experienced through creating social capital. Using social network analysis techniques, Paper 3 explores the structure of consumer value exchange between participants in the IBD community. Value is exchanged between both experienced and newer participants, and a stewardship role is identified both structurally and through participant profiling. Paper 4 draws widely from cross-disciplinary literature to develop and clarify the concepts of spiritual value and *communitas*. Both concepts are operationalised through a qualitative study of the same IBD community used for Papers 2 and 3. Additionally, a panel study involving participants in a variety of health communities identifies positive relationships between *communitas*, spiritual value and quality of life. Together these four papers identify online health communities as important spaces for the co-creation of value between health consumers.

STATEMENT OF ORIGINAL AUTHORSHIP

The work embodied in this thesis has not been submitted for a higher degree to any other university or institution. To the best of my knowledge and belief the thesis contains no material previously published or written by another person except where due reference is made.

Undertaking this thesis has involved human intervention for which I received approval from the Macquarie University Human Ethics Committee. Ethics approval reference numbers are 5201200616 and 5201400741.

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As principal author of three papers included in this thesis, and second author of one, I acknowledge the contribution of my supervisor in preparation of the included papers, with contribution ratios and target journals outlined below.

Paper 1	Consumer-to-consumer value within social networks	Susan Stewart Loane Cynthia M. Webster	65% 35%	The Marketing Review (published)
Paper 2	Social capital and consumer value co-created within an online health community	Susan Stewart Loane Cynthia M. Webster	80% 20%	Journal of Service Research
Paper 3	Value-in-context: exploring the macro, meso and micro levels within an online health community	Cynthia M. Webster Susan Stewart Loane	55% 45%	Journal of Service Theory and Practice
Paper 4	Connecting with strangers online: improved quality of life through experiencing communitas and co-creating spiritual value in online health communities	Susan Stewart Loane Cynthia M. Webster	70% 30%	International Journal of Research in Marketing

Throughout my candidature I have submitted papers to conferences and journals and I would like to acknowledge the helpful feedback and guidance provided by numerous editors and anonymous reviewers. In particular I would like to thank Professor Rob Kozinets, keynote speaker at the Academy of Marketing conference in Cardiff, July 2013, who attended my presentation based on the theoretical basis for Paper 2. His insightful comments helped me to see new potential in the data I had collected and led to the development of Paper 4 and Appendix C.

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Chapter 1. INTRODUCTION TO THE THESIS

As early as the 1960's, when computers were first linked and able to send messages from one user to another, people socialised using digital media. Early digital communicators were elite computer programmers working in university and government laboratories. Computer enthusiasts began to purchase or build computers at home and, with connections via telecommunications technology, online communities began to form (Rheingold, 1993).

The formation of and participation in online communities with other users of the internet is no longer a niche activity performed by technology enthusiasts. According to daily tracking of American internet use by the Pew Internet Life Project, Americans of all ages are embracing online communities and online social networks in rapidly increasing numbers. Teens aged 13-17 are the heaviest users of online social technologies, with usage rates of 92% amongst this age cohort. In addition, older Americans are adopting these communication technologies at a rapid rate (Lenhart, 2015). Between April 2009 and January 2014 social communication using internet-based technologies increased from 25% to 65% amongst adults aged 50-64 and from 13%-49% amongst adults aged 65 and older (Madden, 2010; Pew Internet & American Life Project, 2014).

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Accompanying changes in communication media are changes in the nature of social relations. Prior to the advent of online communities, social relations were typically conducted between individuals who had met one another in a physical sense through work, neighbourhood or social activities. Today these geographically-defined communities often overlap with supplementary online communities defined by common interests or shared online activities rather than by physical proximity (Fischer, Bristor, & Gainer, 1996; Wellman, 2001).

The genesis of this thesis lies in the question of what draws people to online communities and then what keeps them there. From a marketing perspective this question might be stated as “what value do consumers gain from participating in an online community?” This broad topic narrows to an exploration of the type of online communities known as “communities of relationship” (Armstrong & Hagel III, 1996) or “tribes” (Canniford & Shankar, 2011), focusing specifically on online health communities used by consumers with a common interest in a shared health condition.

The papers included in this thesis explore consumers’ use of online health communities through the lens of consumer value, considering the full range of value types, functional, affective, social and rational (Sánchez, Callarisa, Rodríguez, & Moliner, 2006), experienced by consumers as they participate in a shared consumption experience.

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1.1 Thesis context

Online communities populated by individuals who share nothing other than a common interest in a health condition are an intriguing source of internet-based, consumer-generated health information for participants. The primary activities of these communities are text-based discussions about a shared health condition, with sharing of quasi-medical advice and exchange of social support.

Peer-to-peer support is more traditionally conducted within real-time support groups, established by non-profit organisations or clinicians, drawing together patients with a shared experience in a particular health condition such as breast cancer or Parkinson's Disease. Real-time support groups, usually moderated by a practiced clinician, are known to help patients cope with stressful life events and contribute to positive outcomes for patients (Braithwaite, Waldron, & Finn, 1999; Cawyer & Smith-Dupre, 2009). Online support groups provide advantages over real-time groups in that they remove barriers of time, distance, transport, social status and physical appearance (Braithwaite, et al., 1999; Lindsay, Smith, Bellaby, & Baker, 2009; Wright, 2000) and provide a level of anonymity that can be important in a health context (Ballantine & Stephenson, 2011).

A recent study by the Pew Internet and American Life Project found as many as 41% of people interviewed view others' health-related commentaries or health experiences through an online support group, website or blog, and 20% of

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people who use the internet for health information contribute their own health-related information through storytelling, tagging, reviewing or contributing to online discussions (Fox & Jones, 2011). Some conditions, in particular those with more debilitating symptoms, appear to be more frequently associated with use of online health communities than others (Owen et al., 2010).

Referred to as the “abandonment of unidirectional provisioning” (Vicdan, 2011, p. 755) the development of peer-to-peer health services is still in its infancy although outcomes such as correction of information asymmetry (Eysenbach & Jadad, 2001; Fischer, et al., 1996) and increased diffusion of health information amongst online patient networks (Demiris, 2006) are well established. Services that pose a direct challenge to doctors’ authority, such as peer-to-peer doctor ratings, are more controversial and take-up by health consumers has been slower (Bacon & McCartney, 2009; Galizzi et al., 2012) although recent research on US health consumers indicates that consumers are turning to these sites in greater numbers, with as many of 35% of consumers choosing their medical service provider after consulting a physician ratings websites (Hanauer, Zheng, Singer, Gebremariam, & Davis, 2014). Online services such as Patients Like Me (www.patientslikeme.com) extend the notion of peer-to-peer support to include collaborative consumer-driven medical research (Wicks et al., 2010), moving towards the kind of collaborative innovation referred to as “we-think” (Leadbeater, 2009).

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The extent to which consumer-driven healthcare will disrupt or democratise the traditional top-down approach to health service delivery is still unclear although consumers express a desire to manage their own healthcare within a “humanising,” supportive social environment (Moisio & Beruchashvili, 2010; Tian et al., 2014). Issues of patient privacy and practitioner control over health information are undergoing challenge by consumer collectives (Vicdan & Dholakia, 2012), but at this time the boundaries of collaborative potential are still untested. Unrelated to health, services such as AirBnB and Uber can compete with or even replace traditional accommodation or transport services because consumers control the physical assets that underlie service delivery. At this point access to health-related assets and information is controlled and regulated by the public sector, corporations or non-profits (J. C. Robinson, 2000) and barriers such as high levels of medical training and accreditation prevent consumers from offering competing diagnostic or treatment services. A more likely collaborative scenario is one where patients and providers work together to design and develop new forms of patient-centred service, such as the integration of digital health management technology and gaming proposed by Tian et al., (2014) enabling consumers to “play” with lifestyle options and see the virtual results of their decisions, based on their own medical data.

The context of this thesis is the primary form of democratised health services available today, the provision of peer-to-peer support services within online health communities administered by health consumers. Seen as a type of parallel health service encounter (Laing, Keeling, & Newholm, 2011), online health communities represent a socialisation of medicine previously available

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only in niche areas of health services, such as community or kinship support provided to pregnant or breastfeeding mothers (Drentea & Moren-Cross, 2005). Today the internet enables health consumers experiencing a vast array of health conditions to connect with one another on a global scale and exchange a range of health advisory and support services.

1.2 Thesis positioning

Much of the marketing literature associated with online communities is set within communities associated with brands (eg. Gambetti & Guendalina, 2014; Muniz & Schau, 2005) or commercial products and services (eg. Harwood & Garry, 2010; Kozinets, 2002). Whether sponsored by firms or administered by consumers, these communities are of great interest to marketers in the commercial sector as they provide opportunities to expose consumers to new or emerging product lines and sell directly to loyal customers. Online communities build brand loyalty, at the same time offering insight into consumer preferences, opinions and thinking (Armstrong & Hagel III, 1996). Overlapping with brand communities are special interest “topic” communities such as online communities for coffee drinkers (Kozinets, 2002), gardeners (Hartmann, Wiertz, & Arnould, 2015) or airline enthusiasts (Seraj, 2012). These communities are not associated with a specific brand, product or service, but act as a virtual gathering space for those who enjoy a particular activity or discussion topic. Some special interest communities focus as much on social support as on the topic of interest, such as the communities that sprang up following the 9/11 disaster in the USA (L. Robinson, 2005) or communities for

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seniors (Wright, 2000). Others provide practical or professional support, such as communities that support computer practitioners (Mathwick, Wiertz, & de Ruyter, 2008) or lawyers (McLure Wasko & Faraj, 2005).

Online special interest communities share a number of features with traditional clubs and societies such as gardening clubs or car clubs. Whether real-time or virtual, the focus of the gathering is the primary topic of interest, but conversation can drift in other directions as the members connect and discover additional shared interests. Knowledge about the topic of interest and associated products and services diffuses through the community as members share product information and useful tips (Brown, Broderick, & Lee, 2007). Online and real-time communities differ in terms of availability and reach, with online communities available 24x7 and reach spanning the globe. Online communities are not constrained by physical space and can accommodate larger memberships (Etzioni & Etzioni, 1997). Less obvious differences include the rate at which interpersonal bonds form, with online bonds taking longer to become deep and supportive (Walther, 1995), a higher level of accountability in real-time communities, and the capacity for online communities to be more accommodating of those with physical limitations (Etzioni & Etzioni, 1997). Online communities are also characterised by more expressive, effusive language, possibly to compensate for limited non-text cues available in the online environment (Walther, 1996). A further difference is the reduced potential for online community members to come together physically, although some online communities manage to cross the physical divide. Rheingold's (1993) early study of *The Well* describes online

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community members gathering in local groups and even attending the funeral of another community member, while a recent study of a land-sharing community identifies both online and real-time components to community activities (McArthur, 2014).

Online health communities are a specific form of special interest community, centred around a shared interest in a health condition. Sharing some of the features of special interest communities, such as availability, reach and an interest in a particular topic, health communities are often populated by people who would prefer *not* to have an interest in their that topic. Unlike gardeners or coffee drinkers, members can't escape or lose interest in their topic as it is part of their physical self. Like other online communities, health communities include discussions about commercial products and services related to the shared health condition, and they can be sponsored by health service providers or by health consumers (Nambisan & Nambisan, 2009). Health consumers use online communities for information sharing, with a strong orientation towards social support. While early consideration of such communities expressed concerns about the quality and veracity of information shared between health consumers (Hardey, 2001), more recent work finds that consumers follow both individual and group processes that minimise sharing of inaccurate information, such as checking information with pharmacists and doctors or triangulating information across multiple websites (Stewart Loane & D'Alessandro, 2014).

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Despite recognition of online health communities as significant enablers of “new capabilities and new mindsets among consumers” (Laing et al., 2010, p. 10), relatively few studies of online communities are set within a health marketing context and studies of online health communities from within the disciplines of sociology, psychology and health understandably fail to address marketing implications (Beaudoin & Tao, 2007; Braithwaite, et al., 1999; Mo & Coulson, 2008). Marketers recognise the capacity for services to improve consumer wellbeing (Ostrom et al., 2010; Ostrom, Parasuraman, Bowen, Patrício, & Voss, 2015), but few studies consider the potential for online health communities, as a form of peer-to-peer service, to take on a transformative role by empowering consumers, enhancing their self-management capabilities and providing therapeutic benefits with resulting impact on health services (Tian, et al., 2014). Recent services marketing scholarship (Ostrom, et al., 2015) identifies important priorities for services marketing research, including the role of consumers in the co-creation of value within the service sector, the transformative potential of services and the interface between consumer communities and services organisations. The papers within this thesis extend marketing scholarship set within online communities into a health context and considers online health communities as settings for service delivery and value creation.

Within the literature pertaining to value co-creation between consumers and firms, the Service-Dominant Logic (Vargo & Lusch, 2004, 2008) re-orientates the relationship between consumers and firms providers to focus more on services and value-in-use than goods and value-in-exchange. The idea that consumers

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construct or co-create value through participating in services offered by firms connects scholarship pertaining to social production (Benkler, 2006), democratised innovation (von Hippel, 2005), value co-creation (McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012; Prahalad & Ramaswamy, 2002), mass innovation (Leadbeater, 2009) and “wikinomics” (Tapscott & Williams, 2006). While consumers’ social ties are often recognised as key influencers of purchase decisions, the interplay between individuals, their social networks and consumption choices remains a challenge for marketers, especially in relation to the intersection between individual agency and collective influence (Cova, 1997; Thomas, Schau, & Price, 2011). Work is underway, however, with recent scholarship identifying social consumption models (Canniford & Shankar, 2011; Rihova, Buhalis, Moital, & Gouthro, 2013), value co-creation within consumer clusters or contexts (Chandler & Vargo, 2011) and benefits of collective consumption (Baron & Harris, 2008; McArthur, 2014). Moreover, a growing body of qualitative marketing research explores consumer behaviour within collectives (Goulding, Shankar, & Canniford, 2013; O’Sullivan, 2009; Schouten & McAlexander, 1995) and a number of recent studies recognise the potential for consumer collectives to be agents for the creation of consumer value experienced by individuals within the collective (Akaka & Chandler, 2011; Rihova, et al., 2013). Other studies find consumers describing value perceived from their social connections in a variety of contexts (Kuruoğlu & Ger, 2014; McArthur, 2014).

The papers within this thesis contribute to a growing body of scholarship associated with collective consumption, identifying social and individual

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benefits beyond the core functions of the consumption experience, such as access to social capital and improved quality of life. This thesis bridges work to date within marketing and other fields such as sociology and health, exploring participation in online health communities as a consumption activity from both an individual and community perspective.

Underlying the thesis is the notion that consumers who sustain ongoing participation in online health communities receive value from doing so. As a consumption experience, an online health community lends itself to delivering value because the consumer can choose whether to belong and to what extent, as well as frequency and duration of visit. The experience is thus highly tailored to the needs of the consumer, who can use the community to compensate for the limitations of the traditional health system with its rationed services, pre-determined service durations and scheduled appointments. Elliot (1997, p. 290) describes liberation from such traditional or dominant consumption patterns as a type of “authentic existential choice.” In constructing such a tailored service, though, online community consumers are highly dependent on fellow participants to behave in ways that meet the needs of others. In this way the consumption experience of each participant is constructed in partnership with other consumers, working together simultaneously to deliver and participate in a peer-to-peer health service

1.3 Thesis approach and structure

The thesis comprises four papers, one theory paper (Paper 1) and three empirical papers exploring the co-creation of consumer value among online health community participants. Much of the prior literature relating to online communities takes a social constructionist approach, representing value from the online community experience as constructed by consumers as they share text-based messages (for examples see: Ewing, 2008; Fischer, et al., 1996; Seraj, 2012). Building upon prior online community scholarship, the three empirical papers within this thesis retain elements of a social constructionist approach, assuming that value will be experienced by community members in different ways, and each will co-create their own version of consumer value with other participants (Edvardsson, Tronvoll, & Gruber, 2011; Holbrook, 1999). Within each paper, though, a number of different research methods are employed to respond to specific research questions.

Paper 1, the theory paper, draws from existing marketing literature and considers the role of consumers in co-creating value for one another. Paper 2 is set within the interpretivist paradigm and builds upon the ideas presented in Paper 1, interpreting the behaviour of health consumers within the online community through the lenses of social capital and consumer value theory. Drawing upon data collected for Paper 2, Paper 3 follows the interpretivist work of Chandler and Vargo (2011) and Edvardsson (2011), identifying consumer value as a product of social interaction within an online community.

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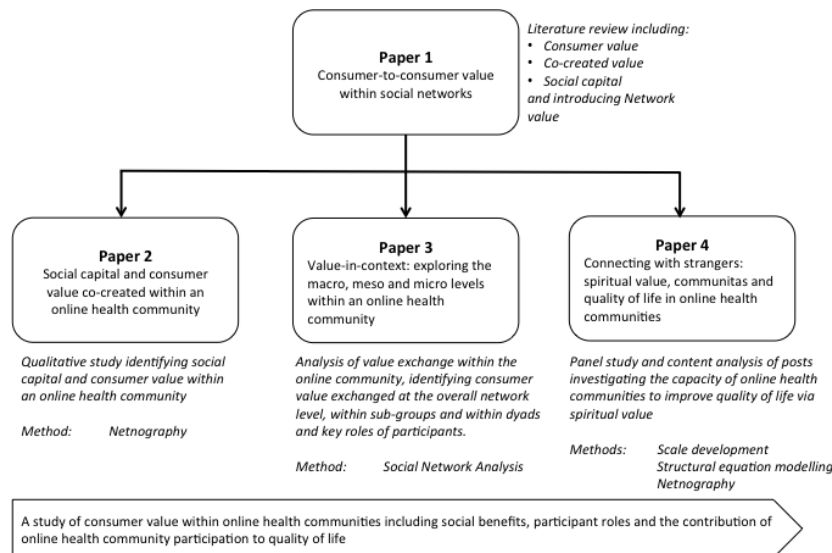
Social Network Analysis (SNA) techniques are applied to identify key roles of health consumers in the delivery and receipt of consumer value. Paper 4 utilises both qualitative and quantitative methods to demonstrate the delivery of spiritual value through experiencing *communitas*. Adopting a positivist approach, Paper 4 uses a panel study, supplemented by qualitative data collected for Paper 2, to demonstrate that consumers who experience spiritual value have a higher quality of life on the support and existential dimensions. The combination of research approaches and methods enables a level of triangulation that converges upon the recognition of multiple forms of value co-created between consumers in a social setting (Patton, 1990), with Papers 2 and 4 each exploring more deeply the specific types of value co-created (Campbell & Fiske, 1959; Jick, 1979).

Additional papers, including one published journal article and three conference papers, are included for reference in Appendices C, D, E, and F. The paper presented in Appendix C is set within the same online health community as Papers 2 and 3 and explores the potential for participation in online health communities to empower consumers and alter their consumption patterns in relation to traditional medical services. The conference papers presented in Appendices D, E and F represent early stages of conceptual development and analysis associated with Papers 2, 3 and 4. The thesis structure is illustrated in Figure 1. The combined papers point to beneficial outcomes for patients who participate in online health communities including benefits associated with

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membership of social networks and, for some participants, improved quality of life.

Figure 1 Thesis Structure



1.4 Contribution and significance of research

The internet not only improves the accessibility of health information and social support for consumers, but also enables consumers themselves to participate in the production of new forms of health information and support (Seale, 2005). Additionally, the internet is a catalyst in the shift from doctor-as-expert to patient-as-consumer health encounters (Gage & Panagakis, 2011). While continuing to use traditional sources of health information such as professionals, friends and family, consumers are increasingly supplementing them with online sources such as blogs produced by other patients, podcasts, websites and online forums (Fox & Jones, 2011).

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Within Paper 1 this thesis makes a theoretical contribution drawing together literature from marketing and sociology to identify the value consumers co-create when acting together in a social context. Paper 1 suggests that existing consumer value typologies should be extended to recognise important social benefits as outcomes of collective consumption experiences. Paper 2 then explores an online health community as a specific collective consumption context, describing the practices health consumers undertake to create social capital within their online community and co-create value for each other. Paper 2 makes two theoretical contributions: 1) developing and operationalising a framework for analysing social capital within online communities and 2) identifying a relationship between social capital and consumer value. Paper 3 is one of few studies to utilise SNA techniques to explore a value-creation network, and possibly the first to explore value created at three levels: the entire network, within smaller sub-groups and at the dyad level. Responding to calls for empirical work that explores value co-creation at different levels of context (Chandler & Lusch, 2015; Labrecque, Esche, Mathwick, Novak, & Hofacker, 2013), Paper 3 operationalises concepts presented within the SD-Logic literature but as yet empirically untested (Chandler & Vargo, 2011). Additionally, Paper 3 identifies the role of stewardship as a value-creating role within online communities. Paper 4 makes a theoretical contribution, drawing together scholarship from marketing, psychology, religion, health and anthropology to clarify and operationalise the concepts of spiritual value and *communitas*. Additionally, Paper 4 develops measures of spiritual value and *communitas* and reports the results of a survey of online health community participants that point to the

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potential for spiritual value to contribute to quality of life. Paper 4 also makes a managerial and practical contribution, identifying online communities as a consumption activity through which those in poor health might achieve spiritual value and improved quality of life.

Together the four papers, comprising two studies (an online community study and a panel study), identify the important role of online health communities within the modern health system. Within such communities consumers assume roles as creators of value, build social capital and in some circumstances deliver and experience value that improves the quality of life for themselves and others. As people live longer, health systems must adapt to larger numbers of consumers living with chronic illness. With consumers turning to each other for health education and social support, health practitioners, marketers and educators need to recognise and adapt to consumers who manage their health within a social context. This thesis explores online health communities as consumption experiences that create and sustain the new health consumer alongside the traditional medical system, identifying important benefits for those who participate.

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Chapter 2. INTRODUCTION TO PAPER 1

Recent research in consumer behaviour and consumer value identifies consumers as active participants in the creation of value (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). At the same time cultural studies within the marketing literature reveal consumers establishing social relationships within a variety of consumption contexts (Goulding, Shankar, & Canniford, 2013; Mathwick, Wiertz, & de Ruyter, 2008; Muniz & Schau, 2005). Only recently has marketing scholarship considered consumer value created specifically as a consequence of socially-embedded consumption (McArthur, 2014; Rihova, Buhalis, Moital, & Gouthro, 2013).

The aim of Paper 1, **Consumer-to-consumer value within social networks**, is to review consumer value literature, specifically focusing on value co-created by consumers within social networks. A number of typologies or categorisations of consumer value are compared. Paper 1 argues that none adequately address consumer value created within a social context and that further work is needed to develop typologies that describe value co-created by consumers within collective consumption settings. Value co-creation is a relatively new field of marketing study, most often studied as a process shared between consumers and firms. Paper 1 explores the process by which consumers co-create value for each other within social networks, drawing upon concepts from the field of sociology to explain collaborative activity between consumers.

Paper 1, **Consumer-to-consumer value within social networks** won the Westburn Publishers Doctoral Literature Review competition in 2013 and is published in *The Marketing Review* (Stewart Loane & Webster, 2014). As such it is presented in published format within this thesis.

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Consumer-to-consumer value within social networks

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With the growth and ongoing popularity of internet-based social networking, consumers are finding new ways to connect and collaborate. This paper explores the value that consumers experience through social networks in a variety of contexts, both online and offline. Drawing upon two streams of marketing literature, one relating to perceived value as a multi-dimensional construct and the other to co-created value, this paper explores consumer perceived value co-created within consumer social networks. Prior empirical studies provide evidence that consumers co-creating value within social networks not only experience forms of functional, affective, social and rational value, as identified in the literature, but also experience a form of connectedness and belonging specific to the social networking context. Value experienced by consumers as a consequence of their participation in social networks has previously been overlooked in much of the marketing literature.

Keywords Co-created value, Perceived value, Consumer value, Value typology, Social network

Introduction

The value literature emanating from within the marketing discipline consistently refers to value as a complex construct, not well understood (Arvidsson, 2011; Chang & Dibb, 2012; Gallarza, Gil-Saura, & Holbrook, 2011; Karababa & Kjeldgaard, 2014; Sánchez-Fernández & Iniesta-Bonilla, 2007). Two clear streams of value literature are capturing the attention of marketing scholars at present. Firstly, the role of the consumer in the creation of value is fundamental to much of the recent value literature (Grönroos, 2011; McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012; Prahalad & Ramaswamy, 2002, 2004; Schau, Muniz, & Arnould, 2009;

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Vargo & Lusch, 2004, 2008). Most of this literature focuses on value *to the firm* as a consequence of consumers and firms co-creating value.

A second and distinct stream of literature focuses on value as perceived *by the consumer* (Gallarza et al., 2011; Sánchez-Fernández & Iniesta-Bonilla, 2007). This review brings those two streams together, exploring how consumers in social networks co-create value for each other. Very little literature considers the role of consumer social networks in creating consumer value (Gruen, Osmonbekov, & Czaplewski, 2005). This review addresses that gap, identifying value experienced by consumers associated with their social networks. Much of the consumer value literature considers forms of value already identified within the various value typologies (de Ruyter, Wetzels, Lemmink, & Mattson, 1997; Holbrook, 1999b; Sánchez, Callarisa, Rodríguez, & Moliner, 2006). This review identifies additional value specifically associated with the experience of being part of a social network.

The review begins with a discussion of the value construct before moving into a detailed exploration of value as perceived by the consumer. A number of typologies or frameworks that identify the forms of value perceived by consumers are compared and contrasted. The review then considers the process by which consumers co-create value, firstly with firms and then with other consumers. As so little conceptual work specifically addresses consumer value co-created within social networks, this review draws heavily from empirical studies and scholarship from the sociology discipline, identifying how consumers work together to create consumer value in a variety of contexts. The review concludes with a discussion of the managerial implications of the creation of consumer value within social networks.

The value construct

The term 'value' is often misunderstood, in part due to the multiple uses of the word 'value' (Arvidsson, 2011; Chang & Dibb, 2012; Gallarza et al., 2011; Karababa & Kjeldgaard, 2014; Sánchez-Fernández & Iniesta-Bonilla, 2007). In the plural form 'values' relates to personal principles that influence one's attitudes and behaviours, while in the singular 'value' relates to an outcome from consumption, measuring relative worth (Arvidsson, 2011). This review concerns value in the singular, often referred to within the literature as utility, worth, benefits and price (Chang & Dibb, 2012).

Differences in the conceptualisation of value also occur across disciplines. Sociologists such as Durkheim and Weber are primarily concerned with value as representing personal values held by a community and influencing social behaviour (Balasubramanian & Mahajan, 2001). Within economics, value is traditionally viewed either as an outcome of exchange in which value is the surplus generated when one sacrifices something in order to receive something (Chang & Dibb, 2012), or the surplus created from the labour of workers (Zwick, Bonsu, & Darmody, 2008). Within the business literature, value is usually equated with profit maximisation of the firm either through controlling costs in comparison to revenue, or by proprietary access to scarce resources (Arvidsson, 2011). Early marketing literature focuses on economic or utilitarian value as an outcome of exchange between firms and customers (Bagozzi, 1975). Conceptualisation of value as more than a

profitable outcome from an economic exchange is now well accepted within the marketing discipline, especially when considering value as perceived by the consumer (Karababa & Kjeldgaard, 2014).

Customer perceived value

The terms 'perceived value' and 'consumer value' are interchangeable (Gallarza et al., 2011) and the construct has even been referred to as customer-perceived value to avoid confusion (Chang & Dibb, 2012). Zeithaml's (1988) early empirical study of consumer preferences in specific consumption categories highlights the experiential nature of consumer value and points out that what one customer perceives as valuable may be of no consequence to another. The concept of perceived value conceives value as an outcome of marketing exchanges in which the consumer gives up something in order to receive something else of greater value *to that consumer* (Holbrook, 1999b). Embedded in the concept of perceived value is the understanding that value is highly individual to each consumer.

Perceived value as a multi-dimensional construct

Zeithaml's (1988) work identifies four different ways that customers determine value: 1) low price; 2) satisfaction (i.e., what I want in a product); 3) quality; and 4) return (i.e., what I get for what I give). Importantly, her study findings suggest that different levels of financial, social, practical and emotional product information contribute to value perceptions. Zeithaml's (1988) work continues to be cited as an important example of the complexity inherent in consumers' perceptions of value (Karababa & Kjeldgaard, 2014), establishing consumer value as a multi-dimensional rather than uni-dimensional construct (Sánchez-Fernández & Iniesta-Bonilla, 2007).

A few years later, Sheth, Newman and Gross (1991) take up the research stream. They develop and test a multi-dimensional model of consumer value, incorporating five value dimensions that can be present concurrently in any given choice situation. Sheth et al.'s (1991) model specifically recognises affective forms of value (emotional and social) as well as more utilitarian forms (functional, epistemic, and conditional). Their work initiates a long line of research on consumer value published within the marketing literature (de Ruyter, et al., 1997; Holbrook, 1999b; Sánchez et al., 2006).

Models of perceived value in the literature identify two primary forms of value: utilitarian value experienced through receipt of a quality product or service that meets expectations, and an affective form of value experienced as feelings such as joy or pleasure (de Ruyter et al., 1997; Sánchez et al., 2006; Sheth et al., 1991). Additionally, some authors describe a form of social value acquired when a product or service enables consumers to identify with a particular social group (Sánchez et al., 2006; Sheth et al., 1991), and others specifically include a rational form of value calculated by the consumer as a cost/benefit trade-off (de Ruyter et al., 1997; Sánchez et al., 2006).

Approaching the question of consumer value from an axiological point of view, Holbrook argues that consumers assess value along three

continuous dimensions: active vs. reactive, self-oriented vs. other-oriented, and extrinsic vs. intrinsic, leading to eight value types. Holbrook's value types and those of other authors are summarised in Table 1, illustrating how value is conceptualised as a multi-dimensional construct.

Holbrook's typology (1999b), while exhibiting more granularity than the other typologies, has not been embraced as a theoretical basis for empirical research. Critics argue that it does not address all forms of value experienced by consumers (Richens, 1999) and that some of the value types are too restrictive (Smith, 1999, referring to ethics value). Richens (1999) argues that the forms of value identified in her own empirical work, such as 'personal growth' and 'freedom', do not fit comfortably within Holbrook's eight cells. While some typologies have been developed into scale measures and empirically tested (de Ruyter, et al., 1997; Sweeney & Soutar, 2001), Holbrook's typology has not, at least not to any great extent. A study of perceived value within an online retail context (Mathwick, Malhotra, & Rigdon, 2001) explores Holbrook's 'self-oriented' dimensions of value, but the scale used for that study has not been developed further. Another study set in an online environment draws from Holbrook's typology and explores status value in a university email context (Bourdeau, Chebat, & Couturier, 2002). Beyond these two studies, and qualitative work by Holbrook himself (Holbrook, 2005, 2006), we have been unable to locate further empirical work based on Holbrook's typology.

Despite criticisms, Holbrook's typology (1999b) remains the most comprehensive treatment of value as perceived by the consumer. Including functional, social, affective and rational forms of value, it is well placed as a framework for considering value experienced by consumers as a consequence of exchange activities. While Holbrook claims that critics have misunderstood the dimensions of his typology (Holbrook, 1999a), it is clear that the value types have potential for further development through empirical work in a variety of consumption contexts.

Table 1 Comparison of multi-dimensional value constructs

Author	Functional value (usefulness, meets expectations, quality)	Social value (consumption is connected with membership of a social group)	Affective value (consumption evokes positive feelings)	Rational value (cost/benefit trade-off)
Zeithaml (1988)	Quality, satisfaction			Price, return
Sheth et al. (1991)	Functional, conditional ¹	Social, conditional	Emotional, epistemic	
de Ruyter et al. (1997)	Practical		Emotional	Logical
Sánchez et al. (2006)	Product, quality, professionalism	social	Emotional	Price
Holbrook (1999b)	Excellence, aesthetics	Status	Esteem, spiritual, ethics, play, aesthetics	Efficiency

¹ Several of the value types appear within more than one value category. For example Sheth et al. (1991, p. 162) refer to conditional value as enhanced functional or social value, depending on antecedents. Holbrook's (1999b) aesthetics value is described as having both functional and affective attributes.

The process of creating value

Moving on from the *concept* and *types* of perceived value, which have been reviewed several times within the past few years (Chang & Dibb, 2012; Gallarza et al., 2011; Karababa & Kjeldgaard, 2014; Sánchez-Fernández & Iniesta-Bonilla, 2007), this review turns to the *process* of creating value, and specifically the process by which consumers create value within social networks or groups.

Considerable attention has been focused on the value-creation process in recent years as marketing thought has shifted from the traditional concept of firms creating value that is delivered to consumers through exchange, to the understanding that value can only be created in partnership with consumers and experienced 'in use'. In other words, firms offer value propositions and customers accept those value propositions and collaborate in the creation of value (Vargo & Lusch, 2004, 2008). While the notion of customers contributing to firm-led processes is not new (von Hippel, 2005), communication between firms and customers today is facilitated by internet connectivity and allows for new forms of collaboration unbounded by geography and on a scale previously unimaginable (Benkler, 2006; Tapscott & Williams, 2006). A considerable body of theoretical literature has built up around the idea that firms and their customers create value collaboratively (Arvidsson, 2011; Benkler, 2006; Cova, Dallı, & Zwick, 2011; Grönroos, 2011; Prahalad & Ramaswamy, 2004), with a relatively small number of scholars considering the specific aspects of the co-creation process such as internal firm management processes associated with co-creation (Payne, Storbacka, & Frow, 2008; Smith & Ng, 2012).

All of the work that has been cited so far addresses the process of creating value from the firm's point of view. Even work that considers the integration of both customer and firm resources focuses on how the firm can manage this integration to provide the best outcome for itself (Payne et al., 2008; Smith & Ng, 2012). A recent review of value co-creation literature identifies only limited scholarship exploring the process of value co-creation from the point of view of the consumers (McColl-Kennedy, et al., 2012).

Value co-creation: The consumer perspective

Prior reviews of value literature establish that value perceived by the consumer is a complex, highly individualised, multi-dimensional construct. It follows that the co-creation of value is also highly individualised when considered from the consumer's perspective. A recent study set within a face-to-face healthcare context sets out to establish "*what customers actually do when they co-create value*" (McColl-Kennedy, et al., 2012, p. 371). The authors identify the eight value co-creation activities that patients carry out with assistance from their healthcare providers (listed in Table 2). While the eight co-creation activities are specific to the healthcare context, Table 2 serves as an illustration of the individual nature of value co-creation across any context. Clearly, different consumers co-create value in different ways depending not only on context but on their own attitudes, values and preferences (Marandi, Little, & Hughes, 2010).

Table 2 Value co-creation activities in a healthcare context

Activity	Examples (non-exhaustive)
Cooperating	Complying with service provider's instructions, and accepting information given
Collating information	Managing medical information gathered from different sources
Combining complementary therapies	Using supplementary medicines or therapeutic techniques
Co-learning	Seeking and sharing information from other sources
Changing ways of doing things	Managing lifestyle changes associated with a health condition (e.g., change of employment) and undertaking activities specifically designed to help cope
Connecting	Building and maintaining relationships with others
Cerebral activities	Actively trying to develop a positive attitude
Co-production	Getting involved in treatment programmes by choosing service providers

Source: McColl-Kennedy et al., 2012

McColl-Kennedy et al.'s (2012) study differs from much of the co-created value literature in that it not only explores the processes by which consumers co-create value (in this case with healthcare providers), but also considers value as perceived by the consumer. A process model for the creation of value is not provided in the study, but by implication, the McColl-Kennedy et al. (2012) study indicates that consumers co-create value by undertaking the activities identified in Table 2. These activities then lead to the creation of value which then, in this study, results in improved quality of life measured across four dimensions: 1) *existential*, concerning an individual's belief that life is meaningful and worthwhile and that they can achieve life goals; 2) *psychological*, concerning feelings about being depressed, nervous, worried, sad or fearing the future; 3) *physical*, concerning feelings of fatigue, pain and weakness; and 4) *support*, concerning feelings of being cared for and encouraged. By working with a healthcare provider to create value, a patient can presumably increase their feelings of *existential quality of life* and *support* and reduce their *psychological* and *physical* distress, resulting in higher overall quality of life.

The McColl-Kennedy et al. (2012) model identifies social support as an outcome of such value co-creation activities as 'connecting' and building relationships with others. The sociology literature, however, sees the provision of social support as an activity that bolsters feelings of personal control and self-esteem in those who receive support (Albrecht & Adelman, 1987)

Social support refers to verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's experience. (Albrecht & Adelman, 1987, p. 19)

As such, social support is not a type of value, but instead enables consumers in a social network to experience value by being connected to others within

Table 3 Types of social support

Information support	Providing the individual with advice or guidance concerning possible solutions to a problem
Instrumental support	Concrete instrumental assistance in which a person in a stressful situation is given the necessary resources to cope with the stressful event
Emotional support	the ability to turn to others for comfort and security during times of stress, leading the person to feel that he or she is cared for by others
Esteem support	The bolstering of a person's sense of competence or self-esteem by other people, for example, giving positive feedback on his or her skills and abilities or expressing a belief that the person is capable of coping with a stressful event
Network support	Feeling part of a group with common interests and concerns

Source: Cutrona & Russell, 1990, p. 322 (paraphrased)

social networks. While there is no definitive typology of social support, Table 3 incorporates the support types present in most typologies (Cutrona & Russell, 1990).

Social support, perceived as a value creation activity rather than an outcome of co-created value, provides both functional and affective types of value. A recent study, also set in a healthcare context, identifies links between social support and both functional and affective forms of value (Stewart Loane, Webster, & D'Alessandro, 2014).

Missing from the value typologies shown in Table 1 is a form of value relating to being part of a network and feeling connected to others. While this is an affective form of value as it relates to the feelings of the consumer, it is only available through participation in a social network. The value typologies, while recognising affective forms of value such as esteem (Holbrook, 1999b) and general positive feelings (de Ruyter et al., 1997; Sánchez et al., 2006; Sheth et al., 1991) do not include a value type that addresses feelings of connectedness and belonging of people undergoing shared experiences such as illness, a group holiday or a collaborative project. The remainder of this paper discusses value co-created by consumers participating within social networks.

Consumers co-creating value together

Relatively few studies in marketing explore the relationship between the processes undertaken by consumers to co-create value and the types of value perceived by consumers. Two such studies look at consumers co-creating value together within online communities (Nambisan & Nambisan, 2009; Nambisan & Baron, 2009). Nambisan and Nambisan (2009) explore the creation and management of a shared store of knowledge as a consumer-led co-creation process within online health forums. The authors identify the online health forum as a social network through which knowledge flows and is shared by all in the creation of an electronic knowledge repository. In the words of the authors "*social relationships become the foundation for new knowledge creation*" (Nambisan & Nambisan, 2009, p. 346). Referring to Table 2, the participants are using a combination of collating information,

co-learning, connecting and cerebral activities to co-create value in the forms of excellence, efficiency, esteem, status, ethics and play (Holbrook, 1999b).

Another study applies the Uses and Gratifications approach (Katz, Blumler, & Gurevitch, 1974) to understand why consumers participate in online technical support forums. Results show that consumers gain four types of benefit: 1) cognitive benefits including efficiency and excellence gained from information; 2) personal benefits such as status, credibility and confidence; 3) hedonic or affective benefits relating to the pleasure of taking part; and 4) social integrative benefits that strengthen ties between participants, providing them with a sense of belonging (Nambisan & Baron, 2009). The authors use the four consumer benefits as a proxy for consumer value (not considering costs perceived by the consumer). Interestingly, the first three benefits identified map well to three of the value types identified in Table 1, but the fourth, social integration, does not. In other words, cognitive benefits map to functional value, personal benefits to social value and hedonic benefits to affective value. While social integration benefits provide a form of affective value, this value is only available when the consumer is part of a social network and the value typologies do not specifically recognise value from social interaction.

Although not recognised in the value typologies, value co-created through social networks or groups of consumers has been explored in a number of contexts within the marketing literature. In a study of online brand communities, Schau, Muniz and Arnould (2009) identify four value-creating practices within an online social context: Social Networking, Impression Management, Community Engagement, and Brand Use. The first three practices involve relationships that form between online community participants. Only the last activity focuses on the actual product or service under consideration. Similar ideas have been expressed about the development of social bonds between participants in online collaborative projects such as Linux and Wikipedia (Tapscott & Williams, 2006). Arnould and Price (1993) find that one of the most important forms of consumer value gained from a rafting trip is a sense of *communitas* through a shared experience and the development of interpersonal bonds. Arvidsson (2009) explores these same ideas, proposing the concept of *philia*, Greek for 'neighbourly love', as the means by which the value created through social relations should be measured. In later work, Arvidsson (2011) builds a case for the existing measure of General Sentiment being used as a measure of the same value.

All of this scholarship points to a form of perceived value experienced only when consumers co-create value in a "*socially embedded consumption experience*" (Mathwick, Wiertz, & de Ruyter, 2008, p. 832). Value gained through social networks is not the same as social value defined by Sheth et al. (1991), which, like Holbrook's (1999b) status value, is positioned as value gained from acquisition of a particular good or service and the impression created by the consumption choice:

The perceived utility acquired from an alternative's association with one or more specific social groups. An alternative acquires social value through association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups. Social value is measured on a profile of choice imagery. (Sheth, et al., 1991, p. 161)

The term 'network value' will be used throughout the rest of this review to indicate a form of value that consumers gain through participation in value-creating social networks. The purpose of a social network may be to create some sort of product or service that is in itself of value, but the process of creating that value as part of a social network creates a form of value not captured by previous value typologies. Providing the benefit of social integration outweighs the costs of participation (e.g., time required to participate, membership fees, equipment costs), the very act of co-creating value as part of a social network is providing value in itself.

Network value

Having identified that participants are gaining value from the experience of participating in a value-creating social network, it is now important to further explore that value and exactly what sort of benefits are derived. As perceived value is highly individualised, it is likely that consumers will perceive network value in different ways. The sociology literature provides guidance as to the benefits that participants gain from involvement in social networks.

Perceived cohesion

Perceived cohesion is defined as "*an individual's sense of belonging to a particular group and his or her feelings of morale associated with membership in the group*" (Bollen & Hoyle, 2000). Cohesion as a feature of social networks typically develops through frequent contact between participants and is associated with faster socialisation of new members into the community culture and increased commitment to the community (Seo, Green, Ko, Lee, & Schenewark, 2007). Both online and offline social networks can be perceived as cohesive. Studies within online social networks show that those who contribute become familiar with how the community operates, and cohesion builds through the sharing of stories and the exchange of social support (Kozinets, 1999).

Social capital

With its roots in the fields of sociology and political economics, the theory of social capital explains why an individual might act on behalf of a community, family group or other social network, even when the actions of the individual lead to personal disadvantage (Coleman, 1988). Social capital is not a value in itself, but a resource available to members of social networks that provides member benefits such as a sense of belonging, access to favours, and goodwill from other members.

The use of the term 'capital' implies that investments can be made in social relations, with some expectation of return (Adler & Kwon, 2002; Coleman, 1988; Lin, 2001). Investments in social capital take the form of expressions of goodwill. Examples often cited include job referrals or access to information (Coleman, 1988). As investments are made, social capital is formed through the development of trust, and shared norms such as the norm of generalised reciprocity. Those who invest in social relations can expect those relations to repay at some point in the future, either directly

or indirectly. Trust and an expectation of generalised reciprocity reduce the need for formal and bureaucratic exchange processes, resulting in greater efficiency in exchange. In addition, trust and shared norms facilitate collective action. Social capital is this build-up or stock of goodwill based on trust and common understandings (norms) situated within a social network.

Two functional forms of social capital are discussed at length in the literature: bonding and bridging capital. Bonding capital is that which exists between those with close ties, such as family members or close friends. Some scholars see bonding capital as one end of a spectrum of tie strength, with the strong ties associated with bonding capital seen as the source of greater cohesion (Adler & Kwon, 2002; Stone, 2001). Bridging social capital is associated with weaker ties (Granovetter, 1973) and structural holes (Burt, 1997) that provide access to new resources and positional advantage within the social network.

Social capital typically is based upon measures of factors such as trust, community engagement, voluntarism and availability of reciprocal goodwill (Mathwick, et al., 2008; Onyx & Bullen, 2000; Putnam, 2000). Consumers working with others in a value-creating social network characterised by such factors are likely to perceive value from their participation and to experience network value in addition to the value associated with the purposeful outputs of the value-creation process.

Each of these constructs can be used to explore network value as a form of value experienced by participants in a value-creating social network.

Examples of network value in the literature

Value from the social processes inherent in co-creation of value within a social network is illustrated in a number of recent examples within the literature. Tapscott and Williams (2006) discuss consumer online collaborations such as the development of Linux and refer to 'virtual ideagoras' where consumers meet and collaborate on value-creating ideas. A study of online health communities (Laing, Keeling, & Newholm, 2011) finds that participants experience value at a personal level through gaining control over their health and feeling that they have a 'home' to go to when they need assistance or succour. Moving away from online examples, Baron and Harris (2008) describe a campaign to save a local cinema in which the campaigners gained 'personal' and 'collective' value through their campaign work. The authors provide examples of individuals who bring specific skills to the campaign, but develop additional skills and capabilities as a consequence of their involvement, resulting in value creation at a 'personal' level. Additionally, the authors identify that the shared campaign experience, requiring a collective understanding of the importance of the cinema, provided momentum for the ongoing campaign, leading to a successful outcome. Drawing from specific studies in the literature, Table 4 identifies how social networks undertake value-creating processes that map to value types and outcomes. Table 4 demonstrates the influence of context on the creation of value as the value-creating tasks in one context are quite different to another. The consumer value types identified for each study may not be exhaustive. Those identified in Table 4 are the value types that are clearly discerned from the cited studies.

Table 4 Examples from the literature of activities in which consumers co-create value

Authors	Context	Activities that create consumer value	Consumer value type	Outcomes for the consumer
Laing et al., (2011)	Participation in online health communities	Asking and responding to questions Sharing medical and health management knowledge Encouraging others to seek the advice of doctors Providing social support	Functional Affective Network	Empowered patients Improved quality of life
Baron & Harris (2008)	Campaign to save a local cinema	Contributing skills to a joint project Sourcing knowledge from outside the team Introducing friends with additional skills to the core team Maintaining relationships with interested people external to the core team	Functional Network	Successful campaign Increased morale Increased skills of team members Increased social networks of team members
Nambisan & Baron (2009)	Participation in online technical support forum	Sharing technical knowledge Solving others' problems Rapid solutions to problems Contributing to vendor product improvement plans Contributing to others' consumption choices Conversing with others	Functional Social Affective Network	More effective product usage Enhanced reputation/sense of self-worth Sense of social identity with the online community Cognitive stimulation and enjoyment leading to increased engagement
Schau et al., (2009)	Participation in online brand communities	Welcoming newcomers Empathising with others Governing the community Evangelising the brand Justifying/rationalising use of the brand Customising the brand Grooming (taking care of) branded items Staking one's place within the brand community Commoditising the brand Milestoning - noting special events such as an anniversary of an individual converting to the brand Badging - converting milestones into symbols/rewards Documenting - writing about one's relationship with the brand Customising branded item	Functional Affective Social Network	Increased useability of the brand Increased self-esteem Sense of belonging as an 'insider' Deeper engagement with the brand
Arnould & Price (1993)	River rafting tourism experience	Pre-trip planning Affect (management of participant feelings) Narrative (communication of experience) Rituals	Affective Network	Satisfaction Personal growth Comradship Harmony with nature

Managerial implications of network value

The marketing discipline is moving on from the idea that consumers are passive recipients of value delivered by firms (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). The idea that value is co-created between firms and customers is now well-established, although managers are still exploring how to manage customer involvement in the value creation process (Payne et al., 2008). The co-creation of value within and between consumer social networks is less well understood. Firms need to give this phenomenon some attention, as consumer social networking processes create value not only for the consumers themselves (perceived value) but also impacts the value available to firms (Grove & Fisk, 1997; Gruen et al., 2005; Gruen, Osmonbekov, & Czaplewski, 2007).

Customers collaboratively creating value with one another present both risks and opportunities for firms. Managing relationships with informed and empowered customers is already challenging. The need to consider the impact of customers' social networks on the perceived value of a service encounter adds additional complexity into the firm-customer relationship. At the same time, the integration of customers' social networks into the firm-to-customer service encounter can increase the value perceived by those customers from their overall encounters, leading to increased value for the firm (Grove & Fisk, 1997).

Conclusion

At the most fundamental level of marketing, an increase in firm value requires an understanding of how customers perceive and create value. While considerable literature focuses on the role of the customer in co-creating value for the firm, insufficient attention has been paid to the role of customer social networks in creating consumer value. The consumer value typologies, while recognising that there is social status attached to certain forms of consumption, largely ignore the value generated between consumers themselves, forms of affective value that are not managed or controlled by firms, but are co-created with other consumers.

This review brings together two streams of marketing literature, one relating to perceived value, and the second relating to co-created value to understand how consumers go about co-creating value within social networks. A number of empirical studies highlight the activities that consumers undertake to co-create value within social networks, identifying that the value-creating activities are highly context-dependent. Despite the contextual nature of the value-creating activities, there is strong evidence that consumers experience value not only from their collaborative, value-creating activities, but also from being part of a social network itself. Moreover, across different contexts, the value created within social networks is similar, involving affective feelings of connectedness and belonging. As the Internet continues to enable new forms of communication and social networking, marketers must pay attention to the value that consumers co-create within social networks to fully understand collaborative consumption experiences from the point of view of the consumer.

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CONCLUSION TO PAPER 1

The first paper within this thesis reviews the consumer value literature with specific emphasis on collective consumption and consumer experience within social networks. Comparison is made between different authors' conceptualisations of value types. The process by which consumers co-create value with each other and with firms is also explored, with a focus on the co-creation of value within a healthcare context.

Paper 1 draws attention to gaps within the value co-creation literature that are further investigated in Papers 2, 3 and 4. Paper 1 identifies that only limited attention is paid within the literature to how consumers co-create value with each other within social networks. Paper 1 argues that collective consumption experiences provide value specific to the social setting, and that this consumer value is under-explored. Papers 2, 3 and 4 then provide deeper examination of consumer value within collective settings. All three empirical papers are set within a healthcare context and explore consumer value derived from social interaction within online health communities. Paper 2 explores value co-created between participants as they build social capital. Drawing from the same online community as that studied in Paper 2, Paper 3 uses social network analysis to explore the structure of value co-creation within the online social network. Paper 4 returns to the notion that collective consumption within a healthcare context can lead to improved quality of life (McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012) and demonstrates that spiritual value,

recognised within Holbrook's (1999) typology of value but not developed further, is a form of value that can contribute to consumers' quality of life.

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Chapter 3. INTRODUCTION TO PAPER 2

Paper 2, **Social capital and consumer value co-created within an online health community** presents qualitative analysis of data collected from an online community for people with Inflammatory Bowel Disease (IBD), the most common form of which is Crohn's Disease. Characterised by digestive pain, chronic diarrhoea and faecal blood, IBD is not only a disease, but a disabling condition that can affect education and employment opportunities (Crohns and Colitis UK, 2004-2012). The nature of symptoms associated with the condition can engender feelings of embarrassment and disgust, and in the words of an academic and sufferer:

I am constantly faced with the question of how to disclose my Crohn's disease. In my day-to-day life, it has taken me close to twenty years to become somewhat comfortable in discussing its primary symptom with friends, colleagues, and students (LaCom, 2007).

Difficulties associated with discussing bowel-related health issues suggest that an online community populated by anonymous fellow-sufferers is likely to provide an attractive virtual space for sharing information about symptoms, treatments and lifestyle impacts. As a research setting the online community presents a spontaneous and natural gathering of research subjects whose interaction can be observed without intervention (Kozinets, 2002).

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Drawing upon interactions among community members over a three month period, Paper 2 presents a netnographic study exploring the potential for consumers to build and maintain social capital within the online community and co-create consumer value in the process. The study is the first to consider both social capital and consumer value together as the theoretical basis for an empirical marketing study. The interplay between these two theoretical areas is an intriguing basis for an online community study as social capital theory helps to interpret the collective action of community members, while consumer value theories guide the classification of individual behaviour within the collective. Due to editorial word limits the review of literature within the paper is necessarily brief. Consumer value literature has already been addressed in some detail within Paper 1. Appendix A provides a supplementary review of online community literature. Similarly, aspects of social capital that cannot be included in the Literature Review are discussed within this introduction.

Social Capital and Health

A somewhat controversial area of research, social capital scholarship is grounded in the work of three academics: sociologists Pierre Bourdieu and James S. Coleman and political scientist Robert Putnam (Bourdieu, 1986; Coleman, 1988; Putnam, 1993, 1995, 2000). While all three acknowledge social capital as a positive outcome from sociability associated with access to resources from social networks, each takes a different approach to the processes by which social capital is generated (Portes, 1998). For Bourdieu, social capital is one of three forms of capital, the other two being economic capital and cultural capital.

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The three forms of capital are fungible in that sociability provides access to the economic resources of others in a social network while cultural capital can be increased through association with cultural institutions or important others (Bourdieu, 1986). Bourdieu's work considers social capital as an outcome of deliberate investment in relationships designed to improve one's economic or cultural position, and a barrier to wealth distribution (Frohlich & Abel, 2014; Schuller, Baron, & Field, 2000). In contrast, Coleman sees social capital as a by-product of sociable activities, with the development of social capital shaped by trust within the social network (Schuller, et al., 2000). While Coleman recognises the potential for those in close contact with resource-rich others to improve their own positions, he also sees social capital as a means of improving the positions of those who are resource-poor, such as disadvantaged children who benefit from social capital through access to education services (Coleman, 1988). Both Coleman and Bourdieu view social capital as a resource held within social relations, created and accessed by the individuals who make up a social network. Putnam extends these ideas to describe social capital as a feature of communities or whole societies. Putnam's research finds strong correlations between the prosperity, health and education levels of societies with levels of social capital, measured using a social capital index that includes voluntary memberships, civic engagement, newspaper readership and other factors (Putnam, 1995, 2000). Putnam also distinguishes between bonding social capital, associated with close ties between network members and bridging social capital, associated with weaker ties (Song, 2013). Putnam's work is popular as it appears to provide solutions to a range of social and economic issues, but critics

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claim that Putnam's arguments are circular and his measures may not indicate social capital at all (Portes, 1998).

Of the three, only Putnam (2000) directly addresses the relationship between social capital and health. Claims that health, either at a societal or individual level, is positively associated with social capital require testing to validate claims and understand the mechanisms through which such a relationship occurs (Abbott & Freeth, 2008). Szreter and Woolcock (2004) synthesise the theoretical bases for much of the literature relating health and social capital and identify three general themes. One theme argues that availability of social support within social networks has a positive impact on health through reduced stress and access to physical support during times of illness. A second theme focuses on inequality and claims that increasing social and economic inequalities lead to heightened anxiety, reduced institutional trust and civic unrest. Thus, decreasing levels of both social capital and health are an outcome of widening social and economic inequality. A third theme considers that social networking provides greater access to material resources, which can then positively influence health. Paper 2 is aligned primarily with the first of the three themes, the "social support theme", with reference to the third.

Recent work by Song (2013), also aligned with the first theme, argues that social support is key to the relationship between social capital and health as it mediates the access individuals have to network resources. Song neatly argues that social cohesion and health are related through social integration, network

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resources and social support, all three of which are represented within social capital theory. Individuals participate in social networks, taking on roles and participating in activities with other members (social integration). If the network members are supportive of one another (social support) they then share resources. Together these factors influence the cohesion of the overall network, represented by trust and reciprocity. The notion that cohesive networks positively influence health is also taken up by Kawachi, Kennedy and Glass (1999) with empirical work identifying three roles of cohesive social networks in positively influencing health outcomes: 1) promoting more rapid diffusion of health information 2) increasing likelihood of adoption of positive health behaviours and 3) reducing likelihood of negative health-related behaviours through social control.

While social systems are an important factor in health outcomes, individual behaviour also contributes to health outcomes at an individual level, not only obvious behavioural choices such as adopting healthy eating habits or giving up smoking, but decisions about whether to share resources or provide social support (Frohlich & Abel, 2014). Thus social capital lies at the intersection of both structural and behavioural factors that influence health outcomes. Paper 2 takes a behavioural approach to identifying how social capital is built within an online health community, aligning the collective outcomes of social capital with the individual benefit or consumer value experienced through participation in the community.

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Online and offline social capital

Much of the scholarship relating to social capital and health focuses on social capital within local neighbourhoods. More recently a substantial body of empirical work has developed around the presence and function of social capital within online social networks (Ellison, Steinfield, & Lampe, 2011; Mathwick, Wiertz, & de Ruyter, 2008; Wellman, Haase, Witte, & Hampton, 2001), including online networks specifically created to support health challenges (Beaudoin & Tao, 2007; Hoffman, 2009). Scholars differ in their views about whether the internet facilitates social capital by decreasing the cost of interactions, reduces social capital by displacing social interactions or supplements social capital by providing an additional channel for interaction (Best & Krueger, 2006; Wellman, et al., 2001). While this conflict has not been resolved, scholars recognise the presence of trust and mutual obligation or generalised reciprocity within online relationships (Lin, 2001), including relationships that are conducted entirely online (Drentea & Moren-Cross, 2005; Mathwick, et al., 2008; McLure Wasko & Faraj, 2005). Paper 2 builds upon this work, identifying practices that build trust and contribute resources to the collective, thus building social capital.

Paper 2 general description

The primary argument developed within this study is that consumers experience value from participating in online communities characterised by social capital. Netnographic methods (Kozinets, 2010) used in this study comprise qualitative analysis of posts to the community and online interviews. Results not only confirm those of earlier studies that find social capital within online

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communities (Blanchard & Horan, 1998; Drentea & Moren-Cross, 2005; Hoffman, 2009; Mathwick, et al., 2008; Steinfield, Ellison, & Lampe, 2008), but extend prior scholarship by identifying fourteen practices participants undertake to create social capital, falling into two general themes. Furthermore, the results identify forms of consumer value co-created through those practices. The significance of this research study lies in the identification of online social networks as spaces where consumers co-create value through the generation of social capital.

In parallel with the collection of qualitative data for Papers 2 and 3, a pilot study explored the potential for social capital and consumer value to be created within the online community. A survey was posted on the IBD community website asking questions about social capital and consumer value with results pointing to a positive relationship between social capital and some forms of consumer value. Only 88 responses were received and the results are not included for examination. Results were presented at the Australian and New Zealand Marketing Academy Conference in 2013 and are included in Appendix D.

Paper 2, **Social capital and consumer value co-created within an online health community**, was submitted to the *Journal of Service Research* on December 12, 2014 and comments from reviewers are incorporated into the version of the paper presented for examination. The paper was resubmitted to the *Journal of Service Research* on August 19, 2015 and is presented within this thesis in the format required by that journal. Figures and tables are embedded

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within the text for ease of reading with the exception of Table 3, which appears at the end of the document before the references.

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Social capital and consumer value co-created within an online health community

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Keywords

Social capital, online community, health, consumer value

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Social capital and consumer value co-created within an online health community

ABSTRACT

The rapid development of internet-enabled collaboration allows consumers to co-create value for each other in online communities. While scholarship relating to such communities is maturing, very little marketing scholarship explores health communities, populated by consumers sharing intimate and deeply personal challenges. Within the context of an online health community for people suffering from Inflammatory Bowel Disease, this qualitative study draws upon both social capital and consumer behaviour theories to demonstrate that consumers who participate in the creation of social capital co-create value for themselves and each other. This netnographic study contributes and operationalizes theoretical frameworks for identifying social capital and consumer value within online consumer discourse. Results reveal fourteen social capital-building practices employed by consumers, and further reveals that these practices fall into two distinct themes: practices that create a caring environment and practices that assist others. Study findings also show that members of online health communities gain affective, functional, social and rational benefits such as empathy, self-esteem, status, connectedness, and efficiency. As a managerial and practical contribution our study identifies online communities as an important component of patients' healthcare networks not only for exchanging information and support but also as settings for access to social capital.

INTRODUCTION

Online communities are key reference groups for consumers of a variety of goods and services (de Valck, van Bruggen, & Wierenga, 2009), delivering both functional and social value to consumers and providing a virtual space in which consumers may connect and create value with others (Tapscott & Williams, 2006). As value-creating agents, online communities have the capacity to disrupt existing supplier-customer relationships. Suppliers no longer control information flow about products and services as consumers seek advice and receive feedback directly from peers (Hoffman & Novak, 1996). Understanding the role these communities play in consumers' experiences of value is key to positioning goods and services in the internet age.

Marketing research looks at brand communities (Gambetti & Guendalina, 2014; Muniz & Schau, 2005; Ramaswamy & Ozcan, 2015), communities based around specific topics of interest (Kozinets, 2002; Seraj, 2012) and communities of practice in which consumers share knowledge and solve problems (Bone, Fombelle, Ray, & Lemon, 2015; Dholakia, Blazevic, Wiertz, & Algesheimer, 2009). While scholarship exploring online communities is maturing, we argue that existing research requires further reflection in health contexts. A shared interest in a health condition is not the same as sharing a love of coffee (Kozinets, 2002), passion for a technology brand (Muniz & Schau, 2005) or assisting others with computer support (Bickart & Schindler, 2001). Health is personal, individual and is typically seen as private business between doctor and patient (Hoffman, 2009). Traditional reference groups for health consumers comprise medical practitioners and

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allied health professionals, involving dyadic encounters rarely shared with other consumers other than immediate family members (Laing et al., 2010). Recent health services scholarship identifies consumers as active participants in personally constructing their healthcare networks incorporating their dyadic encounters into private, public and commercial resources (McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012; Sweeney, Danaher, & McColl-Kennedy, 2015). Within these personally-constructed healthcare networks, online health communities represent an alternative reference group or parallel service system that delivers value not available within the traditional healthcare system (Laing, Keeling, & Newholm, 2011).

Research recognizes both online and offline consumption experiences as opportunities for consumers to “link” together and create social capital (Chandler & Chen, 2014; Mathwick, Wiertz, & de Ruyter, 2008). Social networks rich in social capital provide their members with access to resources and opportunities to pursue shared objectives (Putnam, 2000; Schuller, Baron, & Field, 2000) and are associated with better health and wellbeing (Putnam, 1995). Social capital does not occur in every social network or community but instead must be built by community members through generalized reciprocity and demonstrations of trust and commitment (Coleman, 1988). Access to social capital may be difficult for those in poor health, especially those who are isolated from local networks (Chenoweth & Stehlik, 2004). The capacity for an online community to facilitate connections between consumers and provide access to social capital can thus be critically important for health consumers.

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Responding to calls to extend online community scholarship into health contexts (McLure Wasko & Faraj, 2005), we incorporate social capital theory (Adler & Kwon, 2002; Coleman, 1988) and consumer value (Chang & Dibb, 2012; Sánchez-Fernández & Iniesta-Bonilla, 2007) to answer two questions: 1) How is social capital generated within an online health community?, and 2) How do consumers experience value when creating social capital within an online health community? We firstly draw upon existing social capital literature to develop a framework for identifying how consumers generate social capital within an online community. We operationalize this framework within an online community for people with Inflammatory Bowel Disease (IBD), identifying fourteen practices used by participants to build social capital. Secondly, we consider the value consumers gain from the process of building social capital. Our aim is to further develop our understanding of the value consumers perceive from participating in online communities, moving beyond general terms such as “social value” (Seraj, 2012) and “linking value” (Cova, 1997) to understand the practices consumers employ to experience value through creating and maintaining social capital.

Our study makes a theoretical contribution by developing and operationalizing a framework for the qualitative analysis of social capital development in online environments and then identifying practices used to develop social capital. We also extend consumer value theory by explicitly identifying types of consumer value experienced at an individual level by health consumers as they build social capital within an online community. Of practical significance we distinguish online communities as important virtual spaces in which health consumers can share the benefits of social capital even

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when they are unable to do so within face-to-face networks. The importance of this research lies in the need for health marketers and service providers to understand and embrace the presence of peer-to-peer online networks in which health consumers act collectively, co-creating social capital and consumer value outside the parameters of the traditional health system.

LITERATURE REVIEW

Our review of the literature firstly addresses the nature of online communities, in particular those associated with health conditions. We then consider the two theoretical bases for our study, social capital and consumer value, with particular attention paid to scholarship that explores these theoretical constructs within online communities.

Online communities and health

Online communities are virtual gathering spaces that allow consumers to provide referrals, complain about poor service, construct consumption stories, share information and validate purchases (Kozinets, 2002; Peters, Bodkin, & Fitzgerald, 2012; Schau, Muniz, & Arnould, 2009). Online communities can be led by firms or consumers (Nambisan & Nambisan, 2009) and may support online-only relationships or supplement offline relationships (Subrahmanyam, Reich, Waichter, & Espinoza, 2008). The structure and strength of online relationships are of interest to marketers and sociologists who explore the social implications and governance of geographically unbounded communities (Etzioni & Etzioni, 1997; Lampe, Walsh, Valesquez, &

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Ozkaya, 2010; Sibai, de Valck, Farrell, & Rudd, 2015; Uslaner, 2004; Wellman & Gulia, 1997). Many online communities share characteristics of traditional geographically-based communities such as a shared sense of community, the presence of rituals and a sense of community obligation (Muniz & O'Guinn, 2001).

Relatively few marketing studies explore online health communities that, unlike other online communities, are based around both information and support relating to challenging and highly personal situations. Early studies identify a sense of patient community and identification with others who share similar challenges, lacking within traditional health systems but present within online health communities (Easterling, 2008; Fischer, Bristor, & Gainer, 1996). Recent work explores online health communities as efficient distribution channels for health information and support operating in parallel with traditional channels (Bugshan, Hajli, Lin, Meatherman, & Cohen, 2014; Laing, et al., 2011) and as sources of tailored health advice efficiently shared between informed health consumers (Liang & Scammon, 2011; Stewart Loane & D'Alessandro, 2014).

A number of studies consider the presence of social capital within online communities (Ellison, Steinfield, & Lampe, 2011; Wellman, Haase, Witte, & Hampton, 2001), although most are set within communities that supplement existing offline relationships. Despite claims that organisations without a physical presence can't adequately build social capital (Prusak & Cohen, 2001), studies of online communities identify social capital within online-only communities based around computer support (Mathwick, et al., 2008; McLure Wasko & Faraj, 2005) and health (Drentea & Moren-Cross, 2005; Hoffman,

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2009), implying that the development of social capital must be an outcome of practices that community members adopt and learn from one another rather than an outcome of physical proximity. Consideration of social capital within such communities can provide additional and important insights into why consumers incorporate online health communities into their overall health management networks. Prior to reviewing literature relating to social capital within online communities, we consider the concept of social capital in general, its definition and its forms.

Social Capital

Social capital theory marries the rational self-interested explanations of behaviour proposed within the field of economics with social phenomena explored within the field of sociology (Castiglione, van Deth, & Wolleb, 2008) and provides one reason why an individual might act on behalf of a community or family group with no immediate payback (Coleman, 1988). By way of example this can involve someone doing a favour for a neighbour with no expectation of a return favour, or an individual going to some lengths to locate an appropriate medical service for a friend. Scholarly work within the fields of sociology and economics demonstrates that communities rich in stocks of social capital confer benefits upon community members such as improved employment prospects and access to scarce information, reduced crime, increased civic engagement and improved education (Matei, 2004; Putnam, 2000).

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Bourdieu (1986, p. 51) refers to social capital as “collectively-owned capital,” and argues that the capital owned by individuals takes the form of economic or cultural capital, with social capital acting as a multiplier of both through sociable effort or collective action (Schuller, et al., 2000).

Contributions to collectively-owned social capital reflect each individual’s willingness to assist other members of their social networks. Communities high in social capital are characterized by individual members actively contributing to the collective and assisting others with no expectation of immediate, direct return. Social capital is developed within social networks through the community norms of generalized reciprocity and trust, which minimizes free-riding as each member has confidence in others to share resources when needed (Adler & Kwon, 2002). Lin’s definition emphasizes social capital as a collective resource, built by the actions of individuals within a social network and accessed by those same individuals when needed:

“resources embedded in a social structure which are accessed and/or mobilized in purposive actions” (Lin, 2001 p. 35)

The social capital literature frequently refers to “bonding” and “bridging” social capital. Bonding social capital includes resources that link individuals within the collective and contributes to cohesiveness and the pursuit of collective goals (Adler & Kwon, 2002). Exchanges involving bonding social capital strengthen relationships and bring individuals closer within social networks (Putnam, 2000), facilitating the development of homogeneous sub-groups within the wider network (Knudsen, Florida, & Rousseau, 2005). Bridging social capital is typically described as resources connecting sub-groups or individuals across weaker ties, providing access to new information

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and opportunities (Adler & Kwon, 2002). The social capital literature addressing bridging social capital reflects Granovetter's (1973) seminal work on the potential social and economic benefits available through weaker ties and Burt's (1997, 2000) important work on structural holes identifying positional advantage within a social network for those who act as a "bridge" between disconnected network members.

Putnam (2000) recognizes online discourse as bridging geography, gender, age and religion whilst at the same time bonding through a common interest, indicating the potential for both bonding and bridging social capital to be present within online communities. The actor-network theory of social relations considers networks to comprise both "humans" and other resources (Law, 1992; Thomas, Price, & Schau, 2013) and in light of this theory, bonding social capital can be seen as a resource that enables geographically disparate individuals to identify with the community as a whole as well as with other individual participants. Bridging social capital within an online community connects participants with both human and non-human resources as social ties are based upon shared, text-based information, ideas and creative expression. Any such resources provided to one participant become a public good, available to all (McLure Wasko, Teigland, & Faraj, 2009), and bridging social capital connects participants with resources that they might otherwise be unable to locate or access.

The presence of social capital within online communities is significant in that people who do not have access to supportive social networks in their local neighbourhoods may instead benefit from social capital in their online social networks. Such networks may be particularly important for

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disadvantaged groups such as the elderly experiencing declining social contact or those who are sick or disabled and unable to participate in conventional face-to-face social life (Chenoweth & Stehlik, 2004).

Access to collective community resources such as information and support is one reason why individuals might choose to participate in an online community. What is less clear is the benefit consumers perceive from continued participation after their initial need for information or support is satisfied. Strong online communities need participants to contribute resources beyond the satisfaction of their own needs, thus adding to the stocks of social capital available for the common good (McLure Wasko, et al., 2009). Participants whose personal needs have been fulfilled must therefore benefit in some way from their continued contribution. To understand what benefits participants gain, we turn to marketing theory and the notion that consumers participate in activities that they perceive to deliver value.

Consumer Value

Marketers are well-served by consumer studies that consider how consumers derive value from the consumption of goods and services (see Chang & Dibb, 2012; Gallarza, Gil-Saura, & Holbrook, 2011; Karababa & Kjeldgaard, 2013; Sánchez-Fernández & Iniesta-Bonilla, 2007 for recent reviews of consumer value literature). Consumer value is personal to the consumer, specific to the context and based on other available consumption choices (Holbrook, 1999). Scholarship set within the context of online communities typically focuses on the potential for such communities to impact

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upon brand value (Cova & White, 2010; Gambetti & Guendalina, 2014; Wu & Sukoco, 2010) although a few authors focus on the types of value experienced by consumers using online communities (Seraj, 2012; Stewart Loane, Webster, & D'Alessandro, 2014).

Value experienced by consumers participating in online communities is usually described as either functional or social. Authors adopt names such as informational or instrumental value for functional forms of value, typically associated with information exchange (Dholakia, Bagozzi, & Klein Pearo, 2004; Wiertz & de Ruyter, 2007). Social value is associated with the creation of ties between participants and feelings of esteem delivered through social support or recognition of status (Seraj, 2012; Sheth, Newman, & Gross, 1991). A further form of value likely to be experienced by participants in an online health community is affective value, associated with emotion and feelings of pleasure (Sheth, et al., 1991). Additionally, some participants may make an explicit cost-benefit tradeoff when deciding to use an online community rather than some alternative source of information and support, seeing the online community as a source of rational value (de Ruyter, Wetzels, Lemmink, & Mattson, 1997).

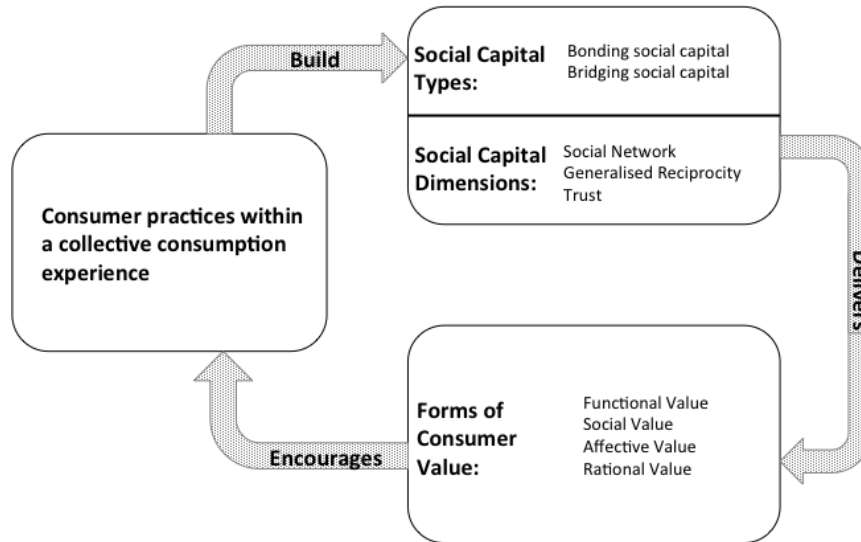
A further form of value associated with collective experience is “linking value” (Cova, 1997), or the capacity for a consumption experience to facilitate social connections and enable people to “link” together. Mathwick et al. (2008) identify a relationship between linking value and social capital within online computer support groups, but as yet it is unclear whether linking value is a specific form of value in itself or a general concept describing multiple forms of value derived from collective consumption. Moreover, while linking

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value is seen as a motivation for consumers to participate in collective consumption experiences (Carù & Cova, 2015), it is unclear to what extent linking value is captured by the consumer, service providers or external parties.

Our study focuses on value captured by the consumer. We propose that consumers who connect with others within an online community value the community experience and act collectively to strengthen their community by building and maintaining both bridging and bonding social capital. In line with practice theory (Lave & Wenger, 1991), we argue that the practices through which social capital is built are embedded within the community (Warde, 2005) and taken up as a learned behaviour, or a form of tacit knowledge (Duguid, 2005). The practices consumers adopt to build and maintain social capital and benefit the community as a whole in turn deliver functional, social, affective and rational forms of value at an individual level, encouraging further collective action (Stewart Loane & Webster, 2014). Prior scholarship set within both online and offline brand communities identifies practices that create consumer value through enhancing the social experience, engaging the community and contributing to the reputation and functionality of the brand itself (Schau, et al., 2009). Our study builds upon this work, focusing specifically on practices associated with the social experience and demonstrating that some consumer value experienced at an individual level is derived from the development and maintenance of social capital, which in turn benefits the entire community. The cycle of action leading to collective and individual benefit is depicted in Figure 1.

Figure 1 Collective consumption, social capital and consumer value



We do not intend to imply that all participants who use online communities are involved in the development of social capital, nor that all perceive value from social capital. We apply this model in a qualitative study of an online health community, using data sourced from posts to the community as well as participant interviews, to examine how some consumers perceive value at an individual level through building and maintaining social capital within a collective.

METHOD

Our study utilizes netnography (Kozinets, 2010), including online observation of posts and online interviews, to qualitatively analyze how participants generate social capital and co-create value. Analysis of publicly

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observable posts within an online community provides insights into participant interactions without researcher influence (de Valck & Sibai, 2014). The use of online interviews allows the researcher to probe more deeply into specific topics and provides opportunities to ask questions about interactions observed within posts.

To guide the qualitative analysis of social capital and consumer value, we develop two separate coding schemes, both based on theoretical frameworks. The use of frameworks recognizes that a researcher's interpretation of meaning is inherently subjective and is informed by the researcher's experience, belief system and theoretical perspective (Feyerabend, 1975; Kuhn, 1962). Application of theoretical frameworks to aid the interpretation of meaning can encourage a more complete understanding (Hunt, 1993; Kuhn, 1962) and ensure that dimensions of the constructs under investigation are not overlooked. In the following paragraphs, we discuss the research context, coding schemes developed, data collection procedures and method of analysis.

Context

The context of this study is an online community for people with Inflammatory Bowel Disease (IBD). Crohn's Disease and Ulcerative Colitis are the two most common forms of IBD, a chronic condition usually diagnosed between the ages of 10 and 40 (Crohns and Colitis UK, 2004-2012). IBD is characterized by inflammation of the digestive tract and impacts digestion, often leading to anaemia, weight loss and impaired growth and development in

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children. A combination of lifetime medication and recurrent surgery is often required to manage the disease although response to medical intervention can be variable and achieving a state of disease remission difficult (Oliva-Hemker et al., 2008). Living with IBD can affect education and employment opportunities, especially for those with more severe symptoms (Crohns and Colitis UK, 2004-2012).

The IBD online community selected for this study, www.crohnsforum.com, has a large and active membership of more than 200,000 participants who register for free membership with provision of a small amount of personal information. Members can initiate threads or respond to others within subforums organized around specific aspects of IBD such as Support, Diet and Supplements, Book Reviews and Parents of Children with IBD. Within each subforum the thread with the most recent posting is moved to the top of the forum. A quick link provides easy access to “today’s posts” to all sub-forums. The site also includes a wiki, or IBD knowledge base to which participants add information, and a doctor-rating facility. Permission for the study was obtained from the online community administrator and site owner and participants were informed of the study through a post made to the online forum. In line with recommendations of the British Psychological Society, participants were assured that any quoted posts would be paraphrased in a way that retains the intent and emotion of the post while disguising the identity of the original poster (The British Psychological Society, 2007).

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Coding Schemes

The first framework guides the identification of social capital within posts and interview data and is based on principles for social capital measurement developed by Stone (2001). Stone's work has previously been used as the basis for identifying social capital in online communities (Stewart Loane & D'Alessandro, 2013) and this current study expands upon that earlier framework to consider the type of social capital, bonding or bridging, as well as the three dimensions of social capital, social relations, trust and generalized reciprocity. While generalized reciprocity is typically described as involving at least three parties, with each benefitting the others only indirectly (Bagozzi, 1975), the framework follows other social capital studies by recognizing contributions to the community or "giving" as being one part of a reciprocated exchange (Abbott & Freeth, 2008), with reciprocal contributions occurring at some point in the past or future. The social capital framework (Table 1) proposes that posts indicating bonding social capital are those that express strong community ties or strengthen ties between participants. Bridging social capital connects participants with resources or others in the community to whom the participant would not otherwise connect.

Table 1: Social Capital Framework for Online Communities

Social capital dimensions			
Type of social capital created	Building and maintaining the social network	Generalized reciprocity/ Contributions to the community	Trust
<i>Bonding social capital</i>	Posts* that build relationships between participants by asking questions of a specific individual or following up on a previous post	Posts that encourage community members to become activist or volunteer to help others	Posts that share personal or intimate information
	Posts that indicate the presence of community norms		Posts that indicate a trusting relationship between participants
	Posts include expressions of community commitment		Posts that indicate participants are following the advice of others
	Posts indicate the importance of the online community to a participant		
<i>Bridging social capital</i>	Posts that connect participants with other participants who have specialist information	Posts that provide information or support additional to that requested	
		Posts that connect participants with new sources of information	
		Posts that offer unsolicited information or advice	

* While the framework is expressed as a guide to analysing observed posts, the ideas conveyed are also applicable to interview data. By way of example expressions of community commitment by an interviewee indicate the presence of bonding social capital.

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The second coding scheme guides identification of consumer value delivered and received within a thread or interview transcript. To avoid researcher bias in determining which posts create value, we consider value to be created only if another participant indicates receipt of value through one of two methods: 1) a text-based response thanking another participant for their post or indicating in some other way that the post was valuable or 2) a one-click “appreciates” response similar to the “Like” function in Facebook. The coding scheme developed is based on previous theoretical work by Stewart Loane, Webster and D’Alessandro (2014) and considers functional, social, affective and rational forms of consumer. An assessment of the type of consumer value gained is based upon the thread, the individual posts within the thread, and the comments from participants who indicate they receive value. Posts can be coded against more than one value type where appropriate. For example, a post thanking a respondent for information might indicate that the information is useful (functional value) and that the recipient feels more confident talking to the doctor (affective value). The coding scheme for consumer value is summarized in Table 2.

Table 2: Consumer value coding scheme

Type of Consumer Value	How assessed
Functional Value	Participant expresses thanks for information or link Participant indicates they have taken advice and had a positive outcome
Social Value	Participant expresses appreciation for the community overall Participant expresses appreciation for actions of other community members Participant indicates enjoyment in community interaction Participant indicates enjoyment of status within community Participant describes satisfaction from “giving back” to others
Affective Value	Participant responds favourably to emotive posts Participant expresses gratitude for the actions of others Participant indicates increased self-esteem in response to esteem-building comments or as an outcome from helping others Participant indicates enjoyment in shared humour
Rational Value	Participant compares online community favourably with other sources of information and support

Data Collection

Observation and collection of posts: Posts and threads to the most active sub-forum were collected over a three-month period. During the observation period 957 full conversation threads were collected containing 16,626 individual interactions between 945 unique userids, indicating a highly active community. Only one question posted to the community forum remained unanswered, with an average of just over nine posts included in each

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conversation thread. Of the 16,626 observed interactions 46% were single-click responses indicating that a participant “appreciated” a post or “sent hugs” to the poster. With such a large dataset it was deemed impractical to code all of the data manually so a subset of all conversation threads was coded, resulting in the coding of 325 (34%) threads containing 4653 (28%) posts made by 474 unique userids. The subset included all threads initiated during weeks 3, 4, 7, 8, 11 and 12 of the observation period to ensure a spread of information topics and participants through the full observation period.

Online interviews: Ten participants, including the online community owner, volunteered to participate in semi-structured online interviews conducted via email over a period of four months in parallel with the final two months of community observation. All ten volunteers were interviewed providing the project team with access to a dispersed geographic sample. Interviews ranged in length from four days to eight weeks depending on availability of interviewees. Flexible interview durations not only accommodated interviewees’ health issues but also enabled them to consider questions and frame responses at their own pace, although the asynchronous interview mode introduced challenges such as some interviewees “disappearing” for weeks at a time (Kivits, 2005).

Interview questions encompassed the following topics: 1) how the interviewee had located the online community, what they found attractive about it at the start and what prompted them to join, 2) what functions and features of the online community they use most often 3) how they interact with

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the online community and how they use the information and support received, 4) examples of times when the online community was helpful, 5) their assessment of the quality and reliability of information provided by other participants and what they do if they see inaccurate information posted to the online community, 6) relationships between the interviewee and other participants and 7) the role of the online community in the interviewee's health care regime. While not all questions were intended to capture data about social capital and consumer value, participants brought up additional ideas and sometimes referred to earlier questions in their responses to later ones, so responses to all questions were considered potentially relevant to social capital and consumer value during coding. Interview transcripts and posts to the online community are considered together in the following description of results.

Data analysis

All data were imported into Nvivo 10 software for coding (QSR International Pty LTD, 2011). An initial round of coding of posts identified dimensions and types of social capital. A second round of coding identified participant practices that generated each social capital dimension. Posts not associated with social capital were excluded from further analysis as they were not relevant to the research questions. The coded posts were then re-examined for evidence of consumer value experienced by participants (Spiggle, 1994). Interview data were used to interpret the findings further and triangulate the researcher's assessment of consumer value delivered (Patton,

1999). Following initial coding of threads and posts, a subset of data was coded a second time by doctoral students with inter-coder reliability of more than 90%. Once coding was considered complete threads coded as representing both social capital and one or more consumer value types were identified for further consideration and analysis.

RESULTS

Data analysis reveals fourteen practices that create social capital, falling into two general categories or themes. Eight practices are associated with the theme of “Creating a Caring Environment” and help build bonding social capital. A further six practices involve “Assisting Others with Managing their Illness” and build both bonding and bridging social capital. Practices that build bonding capital develop a sense of belonging and acceptance amongst participants and encourage repeat visits. Practices that build bridging social capital connect participants with resources to which they might otherwise not have access, including other community members, information or external resources such as medical specialists or non-profit organisations. Following analysis of social capital building practices, we address our second research question, considering the forms of consumer value delivered through building social capital. An overall summary of the social capital building practices identified, the type of social capital created, and the consumer value delivered is included in Table 3.

Creating a Caring Environment

Participants demonstrate close bonds within the social network by *expressing affection, hope and trust*. Some posts express affection directly while others offer to include other participants in prayers. The community site includes a function that allows participants to send “hugs” through a single-click, similar to the Facebook “Like” function. This feature is used often, especially when the original post contains material about emotional or physical suffering.

I'm so glad you've come back to the forum. Keep coming to visit because we all miss you and your support. (C424, Male, USA, Member for 16 months)

I hope and pray that you get a diagnosis and treatment soon, and that you feel relief from suffering. (C776, Male, USA, Member for 2.5 years)

Participants express directly their affection and trust in the online community. Regular expressions of this type build an impression of the community as a safe place in which to discuss awkward health issues.

I'm so thankful for this forum. A lot of what I type out for you guys is too embarrassing to talk to anyone else about. (C595, Male, USA, member 3.5 years)

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Experienced participants deliberately work to build a sense of community by *encouraging continued participation*. Practices include 1) asking after someone who was due to have tests, 2) following up on an idle thread where the solution is not resolved within a day or two, 3) demonstrating an interest in the well-being of others, 4) asking others to come back and report in after they have seen their doctor or had their surgery and 5) validating the decisions others make about their treatment. Those enquired after inevitably respond with thanks and an update on their treatment plan or test results. Exchanges such as these indicate that participants see other members of the social network as individuals and keep track of others' health status. Such exchanges encourage repeat visits and help to maintain and strengthen ties between participants and the online community.

Rituals also build a sense of community and help participants to identify as members of the social network. New members are asked to *visit the "My Story" sub-forum* and post the story of their illness and diagnosis. For many this story is long as diagnosis can take several years. For others the story is dramatic and may involve urgent, life-saving surgery with a diagnosis occurring on the operating table. Sharing their story discourages new members from visiting once to ask a question and then not coming back as they can re-visit their personal story thread to read responses and engage further in online discourse with those who respond.

Participants are not discouraged from posting about issues unrelated to IBD and many post about family, relationships with friends, work troubles and other topics, by these means *connecting with others through non-IBD topics*.

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Usually such issues overlap with health such as a car breakdown that prevents a participant from getting to a medical appointment or a request for word-of-mouth opinions about kitchen devices that assist with producing foods suitable for an IBD diet. One participant proudly posts about his 12-year-old child's idea for an alternative stoma model, resulting in many expressions of appreciation from other participants, including one-click responses and text responses admiring his child's ingenuity and empathy. These posts indicate the importance of the community as a reference group not only for disease information but also for general support relating to life, family and employment for those managing IBD.

A further observed practice that builds bonds between participants while also creating a friendly environment is that of *sharing humour*. Chronic symptoms of gas, diarrhea and rectal bleeding, while serious and life-changing, provide an opportunity for some participants to entertain others with stories of how they have embarrassed themselves and those around them.

I used to joke that my idea of heaven would be a dry fart. Honestly, there are times when you just don't know what's going to come out. (C200, Male, USA, member for 1.5 years)

LOL. I have to laugh at that or I'd cry. (C209, Female, UK, new member)

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Trust in the community is demonstrated through *discussions of embarrassing or intimate symptoms*. Such discussions strengthen ties between participants who can empathize with the experience of others.

I've gained weight and have side effects from the drugs, and I feel sick all the time. The result is that I've never been less sexually active than I am now. Has anyone else got a low sex drive? I'd appreciate any tips or tricks on how to increase my sex drive despite all the horrible symptoms and drugs. (C685, Male, Canada, member 4 months)

The disease makes me so tired and my body just aches. Like you I'd love to have a sex life but I don't have the energy and I think it would be more work than fun. (C019, Male, USA, member 3 years)

A further practice that builds trust is that of *providing citations for information*. All participants are expected to provide citations for information shared, a practice that helps to manage the quality of information shared between participants and builds confidence in the veracity of advice.

Do you have a paper or other source that shows that fecal transplants work well in this situation? (Male Administrator, USA, responding to a treatment suggestion from C019)

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As a staff member I know we work hard to go through the forum and check for spam or for people who are giving out false information. We encourage members to give the sources of their information or to say "in my opinion". (interview with C024, Female Moderator, UK, member for 4 years)

Interviewees are all able to name (via pseudonym) specific trusted participants. Some base this trust on a history of reliable information shared by that specific participant. Others report that they have checked information against other sources and found the other participant to be a regular source of reliable advice. C024 reports in her interview that participants who consistently flout the appropriate behaviour standards, neglecting to cite information or posting advertising content, are eventually banned from the community.

While interviewees express caution about taking the advice of unknown strangers, trust is evident within many exchanges of information and support, indicating the presence of bonding social capital. In some cases participants indicate they have *taken the advice of others* or intend to do so.

With those symptoms I think you should eat a low-fibre diet for a while
(C093, Female, UK, member for 3 years)

Good idea. I'll do that. Thanks. (C115, Female, UK, member for 2 years)

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Assisting Others with Managing their Illness

Both new and experienced participants give to the community by assisting others, answering questions and giving advice without indicating an expectation of return assistance. Such giving behaviour represents the presence of generalized reciprocity and builds bonds between community members who can connect directly with others experiencing similar challenges. The public nature of the discussion, where all participants can see all responses, is characteristic of most online health communities and encourages generalized exchange of support and information. Questions are posted to the community at large and those who can contribute to the thread do so with an expectation that when they need help someone will respond to their own request, not necessarily the same individual they have helped in the past.

Experienced participants strengthen the community by *mentoring or coaching others* to advocate for improved healthcare, helping to empower others. Participants are encouraged to use the online community as a key reference group for their healthcare management.

I don't think you should put up with second-rate treatment. Ask your GP to refer you to a different specialist. (0131, Female, UK, member for 8 months)

I really think you should set up a phone or in-person appointment with your specialist to discuss those results in greater detail. Tell him you're

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not satisfied with the response you received and you need more detail and understanding. (C022, Female, USA, Member for 10 months)

Group norms and expectations of behaviour also encourage a sense of community and help with community management. One of the strongest norms is that of *encouraging participants to seek help from their doctors*. The online community is a first line of enquiry, but participants often provide advice along with an entreaty for the original poster to seek help from a medical practitioner, performing an informal triage service. An example occurs when C717 (Female, UK, new member) complains that she has extreme pain in her right side. She has been to the doctor and received painkillers, but she has missed several days of work and her employer is unhappy. Typical of the responses given by members of www.crohnsforum.com is this from C921 (Male, Germany, new member) offering sympathy, a suggested treatment plan and a recommendation to see the doctor.

I'm sorry to hear you're in so much pain. You should see a competent gastro doctor with a Crohn's specialisation. This could be more than just a flare-up because you are constipated. If it's "just" a flareup then it should be treated with corticosteroids. Have you had a colonoscopy and blood test recently to determine whether your disease is active?

Another practice enhancing the assistance provided to others is that of *probing for more information*. A thread may begin with an initial request for information about symptoms or treatment. The respondent probes and asks

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more detailed questions about symptoms. Such probing assists those responding to target their advice to more closely match the original poster's needs while at the same time enticing the original poster into repeat visits to share more about their situation.

Participants build bridging social capital by *contributing information drawn from a variety of sources* to the online community. Some are considered to “go the extra mile” by those to whom they are responding. This example from an interview with C085 (Female interviewee, Canada, member for 2 years) indicates that she has experienced a dramatic improvement in her health after another participant posted a substantial amount of information from a book in response to her request for help:

A member of the forum wrote out all the info about the diet for me from her patient booklet. I owe my remission to that member. I couldn't have returned to eating the way that I did without her help.

Sources of information may be external, such as the book described above, or already available within the community such as contributions to the doctor-rating function. Participants search out older threads in which a particular issue is discussed and provide links to prior discussion threads to assist those who ask for help. Some participants are considered knowledgeable about specific subject matter and can be “tagged” within a post by another participant. A “tag” generates a system email to the “tagged” participant inviting him or her to join the thread and contribute knowledge and advice.

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Some participants provide others with referrals for specific medical practitioners. These are not general referrals such as those within the doctor-rating function but are instead tailored to the specific situation and geographic location of the individual who needs help. One notable example is a series of posts between a group of Indian participants. One is unable to get adequate medical support in her home city and, on the advice of another participant, flies to another city in India to seek appropriate treatment.

Bridging social capital is also created when participants *offer unsolicited support or advice*, or contribute to the community without being asked. This practice connects participants with information or support before they even recognize the need. An example occurs when a male participant from the UK (member for 2.5 years) offers to create an entry in the community wiki with information about health apps that participants are using. No one asked him to do this, but he noticed a number of posts that mentioned useful apps and thought that everyone could benefit from that information in a central place. His contribution prompted a number of other participants to investigate whether they might gain benefit from using a health app, something they had not previously considered. Participants also voluntarily contribute to the doctor ratings, naming medical practitioners and rating them in terms of service quality, efficiency and manner. These contributions contribute bridging social capital by connecting participants to previously unknown medical specialists in their geographic area.

The practices described build social capital in two ways. Eight practices create an environment that encourages sharing and support, creating a norm

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of supportive, caring online behaviour that contributes to the development of bonding social capital. Six further practices involve assisting others, with two contributing to the development of bonding social capital. Encouraging others to seek help from their doctors and probing for more information ensure that participants receive the best and most appropriate advice, targeted at their specific situations. The remaining four practices involved in assisting others develop bridging social capital by connecting participants to information, resources or other participants that were previously unknown or inaccessible.

Consumer Value

Our analysis now turns to understanding how the process of building social capital delivers value to participants. Four forms of consumer value are identified within posts: affective, functional, social and rational, depending on the content of the post and response of other participants. As our purpose is to understand how the process of building social capital delivers value to participants, only posts that contribute to social capital are considered in this analysis.

Affective value is one of the most prevalent forms of value experienced with seven of the fourteen social capital building practices delivering affective value. Affective value, most often associated with bonding social capital, is an emotional response (de Ruyter, et al., 1997) associated with positive feelings toward the online community. Positive feelings may be derived through satisfaction from helping someone else, or receiving esteem-building comments. Participants build esteem by expressing affection or empowering

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other participants to advocate for improved care, as well as through expressions of commitment to the community overall.

I feel so lucky that others have shared so much and I have benefited from that. (C086, Female, Australia, member for 1.5 years)

Functional value is equally prevalent with seven of the social capital building practices delivering this form of value. Practices that deliver functional value build a mix of bonding and bridging social capital. Functional value is related to usefulness, quality, professionalism and standards (Sánchez-Fernández & Iniesta-Bonilla, 2007; Zeithaml, 1988). Participants provide evidence of functional value received from others when they indicate that they intend to try a new medication, change doctor or alter their diet. Community practices such as citing information sources and tagging “lay experts” contribute to the functional value of information provided, improving credibility and ensuring that the most knowledgeable participants are involved in discussions. The practice of probing participants for more information about their problems enables proposed solutions to be more closely tailored to the participant’s needs. Drawing from a wide variety of sources external to the community, participants assist one another by bringing together the latest information from journals and medical websites as well information from doctors and pharmacists around the world.

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Social value is related to benefits from being part of a social network (Sánchez-Fernández & Iniesta-Bonilla, 2007). The online community provides an opportunity for participants to express themselves to an understanding audience. Contributing a “My Story” characterized by suffering or medical drama can lead to social value as other participants respond with admiring comments about the courage or good fortune of the storyteller. The online community also offers an opportunity for participants to vent their frustrations about the difficulty of living with a chronic disease, again attracting admiration for overcoming adversity or handling a challenging situation well. Participants indicate that they value the opportunity to commune with others who share their suffering and understand their situation.

Thank heavens for this forum where writing it down and getting a few replies can help you feel better. (C013, Female, Australia, member for 8 months)

Rational value is a logical form of value most often associated with a cost-benefit tradeoff (de Ruyter, et al., 1997). Participants using the online community as a form of triage experience rational value as they can efficiently receive advice and guidance about a health problem at any time of the day or night. The price paid is the potential for misguided or inexperienced advice, which is managed through practices such as citing information and tagging lay experts. Rational value represents the efficacy associated with obtaining and acting

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upon rapid advice from the online community as opposed to making an appointment to consult a doctor, possibly unnecessarily.

Table 3 indicates that consumer value is experienced by posters and recipients in the process of creating social capital. Posters indicate value received when their suggestions are taken up or contributions are praised. Recipients indicate value received when others provide caring comments or assist with diagnostic or treatment suggestions. Consumer value is delivered through the creation of both bonding and bridging capital, with bonding capital more closely associated with affective and social value and bridging capital more closely associated with functional value.

DISCUSSION

Both bonding and bridging forms of social capital are evident within the online community. Posts that build a sense of community and strengthen ties between participants contribute to bonding social capital. Following up after a participant's surgery, probing for more information to better understand someone else's situation and enquiring after someone's else's test results are all examples of posts that strengthen social ties and build bonding social capital. Additionally, rituals similar to those recognized within brand communities (Muniz & O'Guinn, 2001) are evident within www.crohnsforum.com. These include posting "My Story" and reinforcing community standards of behaviour, both contributing to a sense of belonging. Those who do not follow rituals or comply with standards are on the outside and eventually banned.

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Posts connecting participants with new sources of information such as a website or other resources previously unknown to the participant build bridging capital as does the practice of “tagging” which brings a subject-matter-expert into the online discourse. Participants who provide medical referrals within posts or through the doctor-rating function demonstrate the presence of bridging social capital as online community participants have the capacity to connect members with previously unknown medical practitioners. In this way the online community bridges geographic and demographic factors whilst participants bond through shared experience and common understanding.

Returning to Lin’s (2001, p. 35) definition of social capital - “*resources embedded in a social structure which are accessed and/or mobilized in purposive actions*” - our study identifies a number of collective resources created by participants at www.crohnsforum.com. Posts that provide answers to questions as well as those delivering unsolicited advice create a searchable resource stocked with health-related information and advice. Information contained in topic-related posts is collected by volunteers and developed into wiki entries. Doctor ratings enable participants to benefit from the experience of others when selecting medical service providers. The searchable posts, wiki and doctor ratings become a public good, a collective resource available to all. Importantly for the consideration of social capital, these resources are embedded within the social network. No such resource would exist without participants willing to share their knowledge and act for the benefit of others. Lin’s definition also refers to the utilisation of resources in purposive actions. Participants at www.crohnsforum.com demonstrate their utilisation of

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collective resources in the management of their health. Some take advice from the online community and discuss it with their doctors; for example, C921 suggesting C717 see the doctor to ask for some diagnostic tests. Others adopt advice directly such as C115 adopting C093's dietary suggestions.

The fourteen practices that build social capital fall into two general themes: practices associated with creating a caring environment and practices associated with assisting others. The first theme includes practices that create an environment conducive to the development of social capital, encouraging a sense of community characterised by empathy and sharing and ensuring that participants feel welcomed and supported. The second theme contains practices that focus on providing help to others and building the stock of community knowledge and competence. Practices within these two themes work together to strengthen the community and position it as an important reference point for IBD sufferers. In line with practice theory, the practices are embedded within the community become learned behaviours passed on as tacit knowledge as part of the process of sharing explicit knowledge about IBD (Duguid, 2005). Few, if any, studies considering social capital within the context of social consumption draw attention to these two different themes and it is unclear whether these themes relate specifically to health contexts or whether they take place in other social networks associated with consumption such as education, group tourism and workplace groups.

Our research questions ask not only whether social capital can be created within an online health community, but how consumers experience value through creating and maintaining social capital. We recognize that some

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participants may perceive value only by observing others, utilizing the community resources as a public good, but not contributing to social capital. For those who choose to participate, value is experienced in a variety of ways, personal to each participant. Adopting the advice of other participants and improving their health situation is one way that participants co-create value from the social capital embedded within the community. Participants also co-create value through community-building processes such as following up to enquire about another participant's test results (affective value), sharing humorous stories about embarrassing symptoms (social value) and probing participants for more information in order to provide tailored solutions (functional value).

In line with Holbrook's argument that consumer value is relative to the context and situation of the consumer (Holbrook, 1999), we recognize that participants may experience different types of value at different times. Two participants, C074 and C086, provide evidence of the variable nature of consumer value. When sick, the advice and support provided by the community delivers functional and social value but, when well, they experience affective value through helping others. Our study provides evidence that the online community experience acts as a setting where consumers perceive multiple forms of value and at least some of that value is co-created during the process of developing and maintaining social capital.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

As an exploratory study of one online community, this study identifies

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practices that create social capital and deliver value to consumers who share a debilitating health challenge. Additional insights may be gained through comparison of two or more online communities, especially a selection of communities that appear to have dissimilar levels of social capital. Factors such as the frequency of participant contribution and different community management practices may moderate the value that participants derive from using online communities. Such factors are yet to be confirmed through empirical work and are important inputs into the success of online communities. A further study could assess an online community at different points in time to explore the evolution of peer-to-peer relationships across different participant segments. Given the association between social capital and consumer value, rich opportunities exist to further explore consumption practices that build social capital within a variety of social contexts.

Only publicly-accessible communication between participants is included in this study, albeit supplemented with interviews between participants and the researcher. Those who reach a certain level of seniority within the community, such as monitors or moderators, are likely to have additional access to each other through email or “administrator only” sub-forums. Stronger ties may be built through these less public communication channels, providing access to additional resources only available to senior members. Access to the restricted or private channels of communication was neither requested nor provided for this study, but future studies would benefit from exploration of both the public and private communications between participants.

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A study such as this provides a rich picture of one single online community at a point in time. Quantitative surveys of participants in a variety of online communities would enable findings to be tested across different types of communities, with consideration given to moderating variables such as demographic factors, duration of illness and seriousness of health condition.

CONCLUSION

As networked electronic communication becomes increasingly ubiquitous, marketers continue to explore the implications of such pervasive technology on relationships between customers and suppliers. Emphasis on word-of-mouth potential of consumer electronic networks or brand value generated within brand communities risks disregarding the forms of value that consumers are generating for and with each other within online communities that are not directly associated with commercial brands, products or services.

Social capital is not a form of value. Social capital in this context takes the form of information and support that participants contribute to the collective, thus creating value for one another. Fourteen practices are identified as contributing to the exchange of social capital, with value derived from participation encouraging further participation and increased social capital. Participants are thus engaged in an ongoing cycle of value co-creation with one another, at the same time increasing the stocks of social capital available to all.

Our study contributes a framework for qualitative assessment of social capital within online communities, adding to theoretical scholarship in the field

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of online social capital. The operationalized framework identifies evidence of both bonding and bridging forms of social capital. Additionally, we identify two different types of practices associated with the creation of social capital within this context: practices that create a caring environment and practices associated with helping others, potentially initiating a new stream of study into how social capital is created in different contexts. We also contribute and operationalize a coding scheme for the identification of consumer value within online communities. As a managerial and practical contribution our study identifies online communities as an important component of patients' healthcare networks not only for exchanging information and support but also as settings for access to social capital.

The attraction of online communities lies in the benefits participants gain from engaging in the community including access to community resources and perceived value through excellent, efficient delivery of information, increased self-esteem and connection with an understanding and supportive cohort. Such benefits are supplementary to the core benefits of diagnosis and treatment offered by the traditional health system yet important for patients seeking both quality of life and treatment as outcomes from their health care regimes.

Table 3 Interplay between social capital-building practices and consumer value types

Social capital building practice	Type of Social Capital	Social capital dimension	Consumer value experienced
<i>Creating a Caring Environment</i>			
Expressing affection, hope and trust	Bonding	Building and maintaining the social network	<i>Affective</i> Recipient: Esteem from being cared for and experiencing increased hope All: Esteem from knowing one is part of a caring group
Encouraging continued participation	Bonding	Building and maintaining the social network	<i>Affective</i> Poster: Esteem from contributing to others' well-being Recipient: Gratitude and appreciation for the concern shown by others.
			<i>Social</i> Recipient: Comfort in knowing that others understand

Table 3 Interplay between social capital-building practices and consumer value types (cont.)

Social capital building practice	Type of Social Capital	Social capital dimension	Consumer value experienced
<i>Creating a Caring Environment (cont.)</i>			
Contributing to “My Story”	Bonding	Building and maintaining the social network	<i>Social</i> Poster: Immediate connection with the community and positive feedback from early posts.
Connecting with others through non-IBD topics	Bonding	Building and maintaining the social network	<i>Social</i> All: Safe and understanding place for expression about life matters beyond IBD.
Sharing humour	Bonding	Building and maintaining the social network	<i>Affective</i> All: Enjoyment in shared banter with others. Satisfaction from belonging to the insider crowd who understand and appreciate the humour.
Discussing intimate or embarrassing discussion topics	Bonding	Trust	<i>Affective</i> All: Opportunity to discuss difficult issues in a safe environment
			<i>Social</i> Poster: Sharing problems with an understanding cohort

Table 3 Interplay between social capital-building practices and consumer value types (cont.)

Social capital building practice	Type of Social Capital	Social capital dimension	Consumer value experienced
<i>Creating a Caring Environment (cont).</i>			
Providing citations for information	Bonding	Trust	<i>Functional</i> Recipient: Confidence in the veracity of information provided by others
Taking the advice of others	Bonding	Trust	<i>Functional</i> Recipient: Improved health through adopting advice <i>Affective</i> Poster: Esteem from someone adopting advice given
<i>Assisting others with managing their illness</i>			
Mentoring and coaching others	Bonding	Building and maintaining the social network Generalized reciprocity / giving	<i>Affective</i> Poster: Esteem through utilizing knowledge and experience to assist others Recipient: Esteem through acquiring knowledge and enhanced advocacy skills.

Table 3 Interplay between social capital-building practices and consumer value types (cont.)

Social capital building practice	Type of Social Capital	Social capital dimension	Consumer value experienced
<i>Assisting others with managing their illness (cont.)</i>			
Encouraging participants to see doctor / performing triage	Bonding	Building and maintaining the social network	<i>Functional</i> Recipient: Validation about the necessity of a doctor's visit
<i>Rational</i> Recipient: Triage available at any time of day or night.			
Probing for more information	Bonding	Building and maintaining the social network	<i>Functional</i> Recipient: Better tailored treatment suggestions
Drawing from a variety of sources	Bridging	Generalized reciprocity / giving	<i>Functional</i> Recipient: Access to sources of information otherwise unknown to them
Tagging other participants	Bridging	Generalized reciprocity / giving	<i>Functional</i> Recipient: Advice received from the most knowledgeable community members

Table 3 Interplay between social capital-building practices and consumer value types (cont.)

Social capital building practice	Type of Social Capital	Social capital dimension	Consumer value experienced
<i>Assisting others with managing their illness (cont.)</i>			
Providing unsolicited contributions	Bridging	Generalized reciprocity / giving	<p><i>Functional</i> Poster: Satisfaction from providing information resources before the recipient(s) realize they need it</p> <p><i>Affective</i> Poster: Esteem from thanks and gratitude from recipients of unsolicited contribution</p>

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CONCLUSION TO PAPER 2

Paper 2 addresses the notion raised in Paper 1 that consumers derive specific value from participating in collective experiences. Paper 2 explores the idea that consumers involved in creating and maintaining social capital experience value from doing so. At the same time as demonstrating consumer value derived from social capital, Paper 2 contributes to the social capital literature by identifying the practices that consumers employ to create and maintain social capital within online settings.

Paper 2 begins to address a gap in the literature that leaves value co-creation between consumers under-researched. Focusing on social capital reveals value that is associated specifically with collective experience as social capital can only be created within a collective. As a qualitative study, Paper 2 presents a rich picture of consumers experiencing value through working collaboratively together within an online health community. Paper 3 extends the findings of Paper 2 by exploring the structure of value co-creation between consumers, converting value-generating interactions between participants in the community into structural ties within a network. The network is then explored quantitatively, using social network analysis techniques to understand the structure and roles of consumers who participate in value co-creation.

Chapter 4. INTRODUCTION TO PAPER 3

Recent marketing scholarship identifies both online and offline consumer networks as important value-creating agents in which consumers collaborate in the co-creation of value (Hartmann, Wiertz, & Arnould, 2015; Schau, Muniz, & Arnould, 2009). Focusing on value creation within an online health community, Paper 3 **Value-in-context: exploring the macro, meso and micro levels within an online health community**, explores value co-creation between health consumers, using social network analysis (SNA) techniques to model value co-creation at three levels of social structure: macro, meso and micro (Chandler & Vargo, 2011).

SNA is typically utilised within research that aims to understand the structure of relationships within a network of interdependent actors. SNA is performed upon the network relationships, rather than upon individual actors or their attributes (Wasserman & Faust, 1994). As a quantitative analytical technique SNA belongs within a positivist research paradigm, but in this case the quantitative techniques are used to explore and interpret three levels of the value co-creation relationships within the network rather than respond to hypotheses.

The *macro* level takes a whole-of-network approach and uses visual inspection of a network graph representing value flow between participants to identify

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patterns within and features of the overall network. The *meso* level investigates the behaviour of value-exchanging triads and cliques within the overall network, exploring the generalised exchange of value amongst participants. The *micro* level considers reciprocal, dyadic exchanges of value utilising both SNA measures of reciprocity and qualitative profiling of network members to understand more about how specific individuals create and experience value. The three levels of analysis support one another, identifying generalised exchange dispersed across the network amongst both experienced and newer network members, with some experienced members acting as stewards of the value-creation process, supporting, encouraging and validating the value co-creation efforts of others.

Paper 3 contributes to a body of marketing literature in which value co-creation is recognised within complex service systems (Edvardsson, Tronvoll, & Gruber, 2011; Vargo, Maglio, & Akaka, 2008) but less so within consumer networks (Rihova, Buhalis, Moital, & Gouthro, 2013). Prior scholarship by Akaka and Chandler (2011) argues that consumers adopt roles and learn behaviours within a social context and draw upon those roles and behaviours to co-create value with other network members. These roles and behaviours relate not only to online consumer communities, but also neighbourhood and kinship networks. The roles played by family, friends, pharmacists and other health providers can all contribute to the value that health consumers experience from their health encounters. Deeper understanding of the roles consumers' play within their social network can assist practitioners to

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construct meaningful health service encounters that contribute value to the health consumers. Paper 3 builds upon those ideas, considering consumer value created by consumers for the benefit of other consumers, at different levels within the social network.

An early version of Paper 3 was presented at the Australian and New Zealand Marketing Academy Conference (ANZMAC) 2014 and is included in Appendix E. Following that presentation the authors were invited to submit the full paper to a special issue of the Journal of Service Theory and Practice. Paper 3, **Value-in-context: analysing an online health community using social network analysis**, was submitted to the Journal of Service Theory and Practice on May 29, 2015 and is currently undergoing review. As such it appears in the format required by that journal. Tables and figures are embedded within the text for ease of reading.

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Value-in-context: exploring the macro, meso and micro levels within an online health community

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Value-in-context: exploring the macro, meso and micro levels within an online health community

Structured abstract

Purpose: The purpose of this paper is to examine the relational context of value co-creation at the macro, meso and micro levels and identify key roles amongst network members of an online health community for people suffering from Inflammatory Bowel Disease.

Design/Method/Approach: This exploratory study takes a social network analytic approach and applies a range of techniques. Macro level analyses include visual inspection of the value exchange graph, measures of core-periphery, density and network centralization. Triad and clique analyses model the meso level. The micro level looks at reciprocity and also incorporates qualitative information gained from content posted to profile key players in the community.

Findings: Social network analysis at the macro, meso and micro levels shows value exchange occurs mainly between newer and more experienced members providing structural evidence for an informal stewardship role. Detailed profiling indicates that key network members gain value primarily from the contribution of others, confirming a stewardship role whereby they encourage and reward the contributions of other members.

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Research limitations: Findings are based on a sample of posts for one online health community. Research examining multiple types of online health networks is required.

Originality/Value: This empirical study is one of the few to apply social network analysis to explore value-in-context. Prior qualitative research into online health communities identifies roles for patients as both consumers and generators of information and social support. The significance of this research lies in the identification of stewardship as an additional role for health consumers operating within peer-to-peer health networks.

Keywords: Value-in-context, co-created value, social network analysis, online health communities

Article classification: Research paper.

Introduction

Fifteen years ago Hardey (1999) recognised the internet as a vehicle for the transformation of health consumers into providers of health knowledge. Internet users are now avid consumers of online health information. Research finds that 61% of Americans look online for health information and 60% of those report that their most recent search has had an impact on their health in terms of treatment decisions, changes in approach to health maintenance, asking additional questions of doctors or getting second opinions, changing diet, exercise or stress management attitudes, making decisions about seeking medical treatment or coping with a chronic condition or managing pain (Fox & Jones, 2011). Consumers do not limit themselves to information published on medical service or research websites. Around 25% of adults go beyond professional sources to look for information posted by other consumers on blogs or within online communities, creating a market for consumer-produced health information.

We consider online health communities as unique contexts where consumers come together to participate in the co-creation and dissemination of valuable consumer-generated health information and support. Despite solid service-dominant (S-D) logic theoretical work addressing the context of value co-creation (Akaka, Vargo, & Schau, 2015; Chandler & Vargo, 2011; Edvardsson, Tronvoll, & Gruber, 2011), little empirical research to date investigates the multiple levels of “value-in-context” at the macro, meso and micro levels. Furthermore, much of value literature recognizes that value co-creation takes place in complex service systems (Edvardsson, et al., 2011; Maglio & Spohrer, 2008; Vargo, Maglio, & Akaka, 2008) but has yet to focus sufficient attention on consumer-to-consumer contexts. Some value research examines consumer interactions within online brand

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communities (Hollebeek & Chen, 2013; Schau, Muniz, & Arnould, 2009) and social communities (Brown, Broderick, & Lee, 2007; Peters, Bodkin, & Fitzgerald, 2012; Seraj, 2012) with only a few studies specifically looking at health communities (Misra, Mukherjee, & Peterson, 2008; Stewart Loane, Webster, & D'Alessandro, 2014).

The aim of this study is to gain deeper insights into the context of online health communities by applying social network analysis (SNA) to examine how context shapes value co-creation within an online community for sufferers of Inflammatory Bowel Disease (IBD). We use a range of network analytic techniques to explore context at the macro, meso and micro levels. At the macro level we graph the exchange network and use measures of cohesion and centralization. The meso layer includes triad and clique analyses. For the micro level we look at reciprocity and also profile key players in the community involved in the receipt and generation of value.

Given consumers' increasing participation in online health communities, and recognized health management benefits from connecting with multiple others (Sweeney, Danaher, & McColl-Kennedy, 2015), a better understanding of online context may assist consumers and healthcare service providers to build and foster consumption experiences that facilitate co-creation and offer satisfying experiences to consumers. The significance of this research lies in the structural analysis and identification of the roles health consumers take on as value-creating agents for others. The internet enables members of online health communities to assume simultaneous roles as recipients of health services, deliverers of certain forms of peer-to-peer health service and stewards of the value-creation process.

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The paper begins with a brief overview of the theoretical underpinnings of S-D logic and value co-creation in health care followed by a discussion of online health communities. In the method section, we describe the SNA research approach and outline the online data collection, coding and measures employed in our study. We identify that value is both created and experienced right across the network, between both newer and more experienced participants. We also identify a stewardship role taken on by some participants who do not use the community as a source of information and advice for themselves but rather experience value from observing others creating value amongst themselves. We conclude with a consideration of research limitations and suggestions for future research.

Theoretical Background

S-D Logic and Value-in-Context

The service-dominant (S-D) logic approach to value co-creation is a growing body of research that takes a network perspective and emphasizes market-related consumer experiences (Vargo & Lusch, 2004, 2008). S-D logic considers all exchange relationships among customers, firms and others and assigns importance to understanding the dynamic social contexts in which consumers interact (Akaka, et al., 2015; Chandler & Vargo, 2011; Edvardsson, et al., 2011). Through exchange, consumers become embedded within their relational contexts assuming certain roles and occupying unique positions. Specific contextual variables such as time, place and social setting influence how consumers connect directly and indirectly to the firm and to one another, thus fostering and/or constraining their access to resources and framing the value co-creation process (Akaka & Chandler, 2011).

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Chandler and Vargo (2011) make salient how context and value co-creation are theoretically interrelated by defining “a particular context as a set of unique actors with unique reciprocal links among them” (p.40). They take a multi-level perspective of context and identify macro, meso and micro levels of context with an overarching meta-level that brings together the three levels of context establishing a service eco-system. The service eco-system concept emphasizes the complex interactive nature of value co-creation and recognizes how exchanges at the dyad, triad and network levels of context evolve and influence the larger social service system (Vargo & Akaka, 2012; Vargo & Lusch, 2011).

To empirically and precisely examine the relational structure of context at multiple levels, Chandler and Vargo (2011) suggest the use of social network analysis (SNA). SNA provides analytic techniques to model the network, triadic and dyadic exchange levels that correspond to value co-creation occurring at the macro, meso and micro levels. While theoretical work continues to be developed in the areas of S-D logic, value-in-context and service eco-systems, the service research field lacks empirical studies applying SNA research to explore value co-creation within different social contexts (Akaka, et al., 2015).

Value Co-creation in Health Care

Marketers use the term value co-creation to mean two things: 1) consumers and service providers working together to create value, and 2) consumers working together to create value for each other. Much of the literature exploring value co-creation within a health context focuses around the first of these ideas, with value captured by the service provider (Nambisan and Nambisan, 2009; Misra et al., 2008). Arvidsson (2011) expresses the view that consumers should at least in part

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capture the value that they co-create. Recent scholarship identifies the co-creation practices consumers undertake in order to directly capture value from their healthcare encounters (McColl-Kennedy et al., 2012).

Within the health literature the idea that consumers contribute to their own beneficial health outcomes is typically referred to as “self-care”, a process by which health consumers play an active role alongside health providers in the implementation of their own healthcare regime (Richardson, 1991). Consumers do more than comply with the directions of health providers though, constructing and managing self-care regimes that draw together resources from within and external to the formal healthcare system (McColl-Kennedy et al., 2012). Studies indicate that those who actively manage their own healthcare experience higher quality of life, and self-care in general may lead to improved health outcomes for the entire community (Rahtz and Syzykman, 2008).

The second meaning of co-creation, consumers working together to create value for each other, is not typical within the traditional healthcare system, which is characterised by dyadic doctor-patient encounters and clinical procedures (Zainuddin, Russell-Bennett, & Previte, 2013). Connecting with other health consumers with similar conditions and collaborating to provide mutual support involve considered effort by consumers yet can be highly beneficial in terms of satisfaction and life quality (Sweeney, et al., 2015). Not only do consumers share knowledge and learn collaboratively (Jayanti and Sing, 2010), the knowledge shared is highly tailored and relevant to the needs of the consumer at a point in time, ensuring a personalised service often unavailable within the traditional health service system (Liang and Scammon, 2011). While health consumers have always participated in physical peer-to-peer support groups facilitated by health providers,

the internet gives health consumers the ability to self-organise and construct a 24 hour self-service specific to their needs.

Online Health Social Networks

Online health communities are one type of patient-oriented health social network that consumers use to supplement and extend conventional health care services (Swan, 2009). Individuals with similar health conditions connect, share information and experiences and provide one another with emotional support. Such communities enable consumers to take more control for managing their health by providing open, collaborative contexts that allow for the decentralized co-creation of value and development of collective intelligence (Bollier, 2007). Participants construct a customised service system that operates in parallel with the services offered by the traditional or formal health service system (Laing, Keeling, & Newholm, 2011), moving between the two in collaboration with other members of the online health network (Stewart Loane & D'Alessandro, 2014). Within the online health network participants develop skills and acquire knowledge that they utilise to their encounters with the formal health service system, correcting asymmetries in the formal system and influencing diagnosis and treatment (Keeling, Laing, & Newholm, 2015).

While considerable marketing scholarship is situated within online communities relating to brands (Gambetti & Guendalina, 2014; Muniz & Schau, 2005; Schau, et al., 2009), topics of interest (Kozinets, 2002; Seraj, 2012) and quasi-professional support communities (Bone, Fombelle, Ray, & Lemon, 2015; Mathwick, Wiertz, & de Ruyter, 2008), very little work explores the value-creating potential of online health communities. The few marketing studies set within a

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health context focus on value captured by firms with little attention paid to consumer value created and experienced by participants themselves (Misra, et al., 2008; Nambisan & Nambisan, 2009). A recent exception explores consumer value created through the sharing of social support within an online health community for people with degenerative neurological diseases (Stewart Loane, et al., 2014).

An important feature of online health social networks is the connection made between health consumers who share a particular health condition. Sharing information about conditions, symptoms, treatments and lifestyle impact with others who understand enables participants to leverage information and make more informed decisions (Swan, 2009) and can lead to increased ability to cope and improved psychological well-being (Rodgers & Chen, 2005). A feature of online health social networks is their lack of overlap with offline networks. Much of the literature exploring online social ties is set within online networks that supplement or support existing offline networks (Ellison, Steinfield, & Lampe, 2011; Wellman & Hampton, 2003) or that facilitate the development of face-to-face ties (McArthur, 2014). A recent typology of consumption-based social networks identifies variable value-creation practices across different types of networks, depending on how the network members consume together (Rihova, Buhalis, Moital, & Gouthro, 2013). Rihova et al.'s work is one of the first to unpack how value is created within different forms of socially-based consumption but it focuses primarily on how service providers can facilitate value co-creation with consumer collectives, albeit recognising the not insignificant role of consumers as value co-creators.

Method

Our exploratory study takes a social network approach (SNA) to examine the relational context of value co-creation at the macro, meso and micro levels. Exploratory research is especially pertinent when examining complex phenomena, such as value-in-context, as it allows for the collection of both quantitative and qualitative information (Maxwell, 2012). SNA is the study of structure and involves the quantitative analysis of relational datasets (Borgatti, Everett, & Johnson, 2013; Wellman & Berkowitz, 1997). A network approach focuses on exchange relationships and identifies structural properties that affect behaviour among social actors, which might be individuals, groups, organisations or countries (Wasserman & Faust, 1994). SNA has become more common in marketing and in health with research investigating such areas as message and product diffusion (Hinz, Skiera, Barrot, & Becker, 2011; Iyengar, Van den Bulte, & Valente, 2011; Watts & Dodds, 2007) and healthcare delivery, coordination and service integration (Hawe et al., 2015; Kwait, Valente, & Celentano, 2001; Provan & Milward, 1995). Supplementing quantitative SNA data with qualitative insights obtained from content in online posts provides a richer, more detailed explanation of consumption experiences embedded within their own social exchange contexts (Coviello, 2005).

Data Collection

The online community selected for this study, www.crohnsforum.com, has a large and active membership of more than 200,000 participants. Inflammatory Bowel Disease (IBD) is a chronic condition characterized by digestive pain, diarrhoea, rectal bleeding, anaemia and weightloss. Diagnosis is typically made between the ages of 10 and 40, leading to a lifetime requirement for medication and recurrent

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surgery. Living with IBD can affect education and employment opportunities, especially for those with more severe symptoms (Crohns and Colitis UK, 2004-2012).

Permission for the study was granted by the administrator of www.crohnsforum.com and community members were informed of the study through a post made to the online forum. The community was assured that any information collected would be anonymised by the research team and quoted material paraphrased in such a way as to avoid identification of the poster through online search, whilst retaining the original intent and content of the post (The British Psychological Society, 2007).

Threads and posts were collected from the two most active sub-forums for a period of three months during early 2013, providing a dataset of 16,682 posts within 957 threads posted by 944 members identified by unique pseudonyms. The current study uses a subset of the data that consists of all threads initiated during Weeks 3, 4, 7, 8, 11 and 12 of the observation period and includes 4653 posts within 325 threads posted by 474 unique pseudonyms. Posts within this reduced dataset include all interactions within the community during the specified weeks of data collection.

Data Preparation & Analysis

Of primary interest to this study is the co-creation of value between participants or “who delivers value to whom”. Within the community, members indicated receipt of value from a post in two ways, either through a text-based response containing content reflecting appreciation or thanks for the initial post, or through a one-click response indicating appreciation (similar to the “like” function in Facebook). Most

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posts that contained an appreciative text-based response also included a one-click appreciation response.

Every post to the community has the potential to be of value to someone, but as researchers we choose not to assume that all posts deliver value and only to measure what is revealed through the responses of participants to others' posts. Participants can provide a single-click response to any post indicating "I appreciated this post." Using this single-click response as a proxy for "I got value from this post" we are able to map the flow of value co-created between participants. Of the 474 unique pseudonyms posting to the forum during the selected observation period, 270 (57%) were involved in value exchange by delivering value, indicating receipt of value or both using a one-click response. The majority of the 270 community members involved in value co-creation were female (61%). Many had been participating for six months or longer (54%) and most were from the USA (51%) and UK (24%).

To explore the network structure of value delivered and received within the community, a 270x270 square, actor-by-actor relational matrix was constructed, with each cell containing a value score representing the number of times a community member used the one-click response to indicate receipt of value from another. By way of example, the number 4 in cell (C36, C24) indicates that community member 24 received value from community member 36 four times during the observation period. Netdraw software (Borgatti, 2002) was used to produce network graphs for visual inspection and UCINET 6 software (Borgatti, Everett, & Freeman, 2002) to conduct quantitative structural analyses of the relational context at the macro, meso and micro levels. Macro level analyses include visual inspection of the value exchange graph, measures of core-periphery,

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density and network centralization. Triad and clique analyses model the meso level. The micro level looks at reciprocity and also incorporates qualitative information gained from content posted to profile key players in the community. Table 1 summarizes the analytical techniques used at the three context levels with further details for each incorporated within the results.

Table 1 Context levels and associated SNA measures

Context level	Analytic level	Measures	Author	Purpose
Macro	Network	Graph Visualization	Freeman, (2000)	Identification of patterns or network elements to be explored further
		Density	Marsden, (1990)	Intensity of value creation
		Centralization	Freeman, (1979)	Level of dispersion of value creation
		Core-periphery	Borgatti & Everett, (1999)	Identification of key value-creators
Meso	Sub-groups	Cliques	Luce & Perry, (1949)	Direct service-to-service exchange
		Triad census	Holland & Leinhardt, (1972)	Exploring patterns of value creation including structural stability, clusterability and transitivity
Micro	Dyads	Reciprocity	Hanneman & Riddle, (2005)	Exploring patterns of relationship between participants
	Individuals	Qualitative Data		Identifying social roles in the core

Results

Results begin with basic statistics giving an overview of posting activity among the 270 community members. SNA of the value matrix follows, starting with the macro-level context followed by the meso and then micro levels. Analyses conclude

at the micro level with the incorporation of qualitative information to profile three community members.

Value Activity Statistics

In total, 696 posts deliver value, where at least one person replied with a one click “appreciate” response. The total value received is 880 as one delivery can result in value received by multiple individuals. Value received ranges from one to nine with 3.26 as the average value received per community member and 1.26 as the average value per post. The average value delivered and received varies with more experienced members involved in a greater level of value co-creation. On average more experienced members deliver 2.62 value to one another and 1.73 to newer members whereas new members deliver on average 1.22 amount of value to experienced members and only 0.72 to other new members. The level of value exchange indicates that more experienced members maintain ties with one another but also actively engage and appreciate newer members of the community.

To assess whether highly active members are those involved in value exchange, we use the Quadratic Assignment Procedure (QAP) (Hubert & Schultz, 1976; Krackhardt, 1988). QAP computes the Pearson correlation between the off-diagonal values of two data matrices. We construct a 270 x 270 activity matrix for all posts not involved in value exchange and compare it with the 270 x 270 value matrix. QAP results show a significant but weak positive relationship between activity level and value exchange ($r = 0.190$, $p < 0.00$) indicating that active members also tend to provide value.

Macro-level Context

To explore value-in-context at the macro-level, we first look at the overall 270 member network graph shown in Figure 1. The network diagram provides an overall view of value-flow within the community with the 270 active members represented as nodes and the relationships between them shown as directed lines. An arrow pointing from member 36 to member, indicates that 36 delivered value to 78. Thicker lines indicate greater exchange of value between two members. More experienced members who have been posting for more than 6 months, are identified in red, and less experienced members in blue.

At the macro-level the graph shows one large component containing 258 members, one small component with four members and four disconnected dyads. Although almost everyone can reach one another either directly or indirectly, few members provide value more than once or twice with only 20 members delivering value three or more times. The graph is also quite sparse with an overall network density of only 0.012. Density is calculated by summing of all scores for each relationship and dividing the total by the number of possible ties, which for a network of 270 members is 72630 possible ties. Network centralization, based on both value delivered out and value received in, is also low. Out-degree centralization is 3.132% and in-degree centralisation is 2.545%, indicating that value co-creation is dispersed throughout the network.

Even though no member dominates the macro-level context, the graph in Figure 1 shows some members are more active and highly connected to one another. Most online communities are characterized by a core group of participants who contribute most of the content within a larger membership (Kraut & Resnick, 2011). To test whether the macro-level context contains core members, a core-

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periphery analysis was performed (Borgatti, et al., 2002; Hanneman & Riddle, 2005). The core-periphery model is based on a correlational analysis that compares the 270x270 matrix of observed data to an “ideal” matrix in which every core member exchanges value with every other core member, and no peripheral members exchange value with any other peripheral members. The routine identifies 10 core network members 1, 2, 11, 13, 19, 36, 142, 149, 224 and 418 representing those most active in delivering and/or receiving value. Model fit is acceptable ($r=0.353$) and density within the core (1.18) is substantially greater than outside (0.007).

Figure 1 incorporates the core-periphery analysis with larger nodes indicating the core members identified. Core members are shown as circles and peripheral members as squares. Interestingly, not all core members are experienced members as 142 has been a member for less than 6 months. Also of interest is the active involvement of peripheral members in creating and receiving value from others. While these members are not as heavily embedded within the network as the core members, they still likely gain important information from online and face-to-face resources external to the online community, and are able to contribute value to the online health social network.

Meso-level Context

Value-in-context at the meso-level is modelled with clique and triad analyses to provide structural information regarding sub-groups. Cliques are maximally, complete sub-graphs (Luce & Perry, 1949). In the context of this social network, cliques are smaller groups of network members who directly exchange value with one another and there is no one else outside of the clique who also directly

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exchanges value with all clique members. The clique analysis routine, based on the Bron and Kerbosch (1973) algorithm, requires relations to be binary and mutual which means multiple instances of value exchanged are represented as a single tie, and value flowing in one direction appears as a mutual tie. A clique analysis on the dichotomized and symmetrized 270 x 270 matrix identifies 185 cliques and finds 148 community members (55%) are not involved in any cliques. Most who are members of cliques are in five or fewer (37%) with only 9% in more than five cliques. Table 2 presents the membership breakdown of the cliques identified by member experience. Most of the 185 cliques are small with only three members. Some cliques only have experienced members, but most cliques contain both experienced and newer members.

Blue = member less than 6 months
Red = member 6 months or more

Table 2 Clique Size by Member Experience

<i>Clique Size</i>	<i>Total</i>	<i>Number of Cliques</i>		
		<i>Experienced Members Only</i>	<i>Newer Members Only</i>	<i>Both Newer & Experienced Members</i>
Any size	185	44	1	140
3 members	118 (63.8%)	38 (21%)	1 (1%)	79 (43%)
4 members	57 (30.8%)	5 (3%)	0	52 (28%)
5 members	10 (5.4%)	1 (1%)	0	9 (5%)

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Following Chandler and Vargo's (2011) use of triads to explain how context frames exchange, we conduct a triad census to explore further structural properties at the meso-level. A triad is a subset of three actors and the directed ties between the actors. In a directed graph, there are 16 different triad types possible (Holland & Leinhardt, 1972). A triad census concisely outlines the local structure of a network by reporting the frequencies for each of the sixteen triad types observed in the data (Faust, 2006). Research employing triad censuses looks at issues of structural balance, clusterability, and transitivity. Table 3 summarises the triad census results. As with most network data, the empty triad (A, B, C) where no ties exist among the three actors is the most common followed by triads where ties between only two of the three actors exist either as a directed tie ($A \rightarrow B, C$) or as a mutual tie ($A \leftrightarrow B, C$). For the triads involving value co-creation among all three actors, the most frequent is the directed line, an intransitive triple in which A delivers value to B who in turn delivers value to C. The directed line structure indicates that value is flowing out to the wider community. The next two frequent triads are both transitive triples. The triadic in-star ($A \rightarrow B \rightarrow C$) shows value is being delivered by two different members directed to the same third party. The triadic out-star ($A \leftarrow B \leftarrow C$) shows one member delivering value to multiple others. The very rare triads, the directed circle ($A \rightarrow B \rightarrow C \rightarrow A$) and complete triad ($C \leftrightarrow A \leftrightarrow B \leftrightarrow C \leftrightarrow$) tend to form bounded clusters which can limit value flow throughout the network.

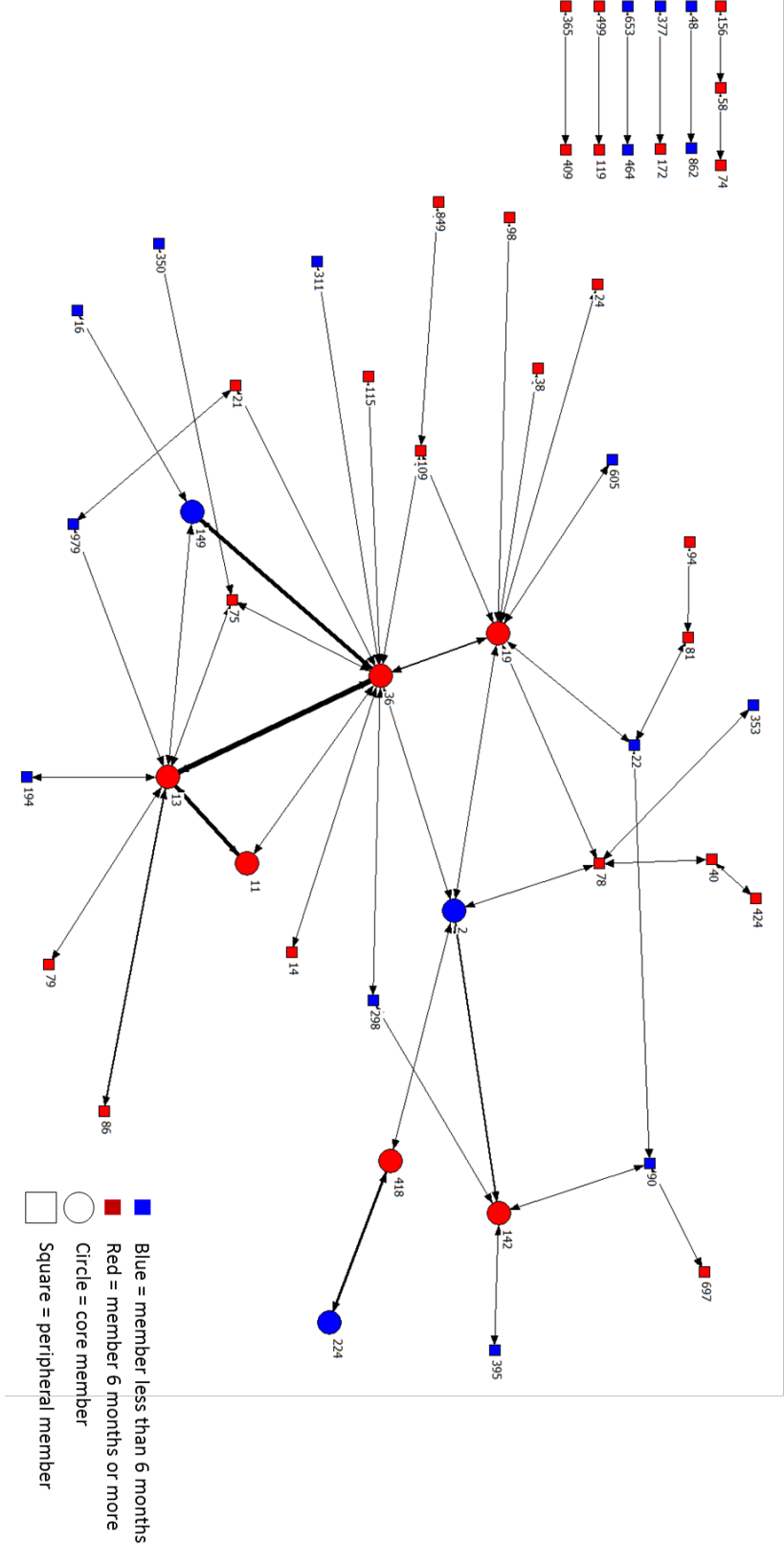
Table 3 Triad Census

Triad Type	Description	Total Number of Triads
A>B>C	directed line	2184
A>B<C	triadic in-star	1943
AC	triadic out-star	1909
AC	one reciprocated and one directed tie	897
A<B<C	one reciprocated and one directed tie	670
A<B<C	triad with two reciprocated ties	115
C<A>B<C	combined in and out star	153
C<A>B<C	one reciprocated and two directed ties	60
C<AC	one reciprocated and two directed ties	40
C<A>B<C	two reciprocated and one directed ties	42
C<A>B>C	one reciprocated and two directed ties	29
A>B>C>A	directed circle	15
C<A<B<C	complete triad, three reciprocated ties	6
A,B,C	empty triad with no ties	3081028
A>B, C	triad with one directed tie	143141
A<B, C	one reciprocated tie between two actors	11908

Micro-level Context

At the micro-level we consider value exchange between dyads. Of the 880 value exchanges, few are mutual in that those who deliver value to a community member rarely receive value from that same member. Overall, only 50 members of the online community are involved in reciprocated value exchange. Network reciprocity is low with only 104 ties reciprocated within 52 dyads or 8% using the dyad method, which is the number of reciprocated dyads divided by the total number of adjoining dyads.

Figure 2 Value flow between members involved in reciprocated value exchange



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The network graph of the reciprocated value exchanges (Figure 2) shows five disconnected dyads, one triad and one large component with 37 members. Many of the reciprocated ties are between experienced members and between experienced and newer members, with few between newer members. The graph also reveals that nine of the 10 core members are involved in reciprocated value exchange. Many of the experienced core members link to newer members, delivering value to each other and providing further evidence that both experienced and newer members play important roles in contributing value to the network.

To better understand how members use the online forum and establish ties with others, we use qualitative data collected from the online community to profile three members, two female and one male, all part of the core group. Basic demographic and usage information about each member is presented in Table 4. Of the three, M36 is the most active poster during the observation period. Despite their high activity and membership of the core group of members, none of the three has taken on a formal role within the community such as Monitor or Moderator. All three actively communicate with both newer and more experienced members, indicating receipt of value from both groups. M13 is noticeably less active in delivering value to newer participants than either of the other two.

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Table 4 Demographic data and usage for three profiled members

	Member 13	Member 36	Member 19
Gender	Female	Female	Male
Location	USA	Australia	USA
Membership	2.5 years	8 months	3.25 years
Frequency*	71.5 times/month	46 times/month	31.5 times/month
Number of posts	70	165	94
Received value total	39	62	46
Received value from experienced members	28	42	35
Received value from newer members	11	20	11
Delivered value total	42	51	38
Delivered value to experienced members	34	30	24
Delivered value to newer members	8	21	14
Clique membership	40	55	30
% of value reciprocated	64%	59%	62%

*Frequency of posting is calculated over the entire membership period

Member 36

M36 has been through periods of severe IBD flare and now has a permanent stoma nicknamed “Sideshow Bob.” M36 is most valued for the excellent information she provides in response to the questions of others. Other members indicate receipt of excellence value when M36 writes with authority about drug treatments, surgical procedures and symptoms of all forms of IBD.

I understand that your diagnosis is unclassified, but do you know where it is? The reason I ask is that it is not uncommon for colonic disease to produce a really foul gas when in a flare.

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I don't see why your GP can't at least give you some mesalamine or prednisone since that is probably what the gastro specialist will start you on anyway.

M36 herself indicates receipt of value from a wide variety of other members, including other members of the core and cliques. During the observation period M36 never requests information or support. She most frequently values the contributions of others who respond to those who need information or support. M36 also receives play value from humorous exchanges about symptoms and treatment.

Member 13

During the period of observation M13 spends time in hospital and continues posting from her hospital bed. Like M36 she asks few questions (only one during the period of observation) but indicates receipt of value from the work of others. She is most valued for her efforts to ensure that questions are responded to, and also for the quality of information she provides in response to questions about symptoms and treatment, often prefaced with stories about her own experience. At times she will respond to a question even if she has no real information to impart to ensure that the poster receives at least one response.

I'm sorry but I don't know much about MRIs. I presume that result refers to the length of the stricture. If you are worried then it's probably best to get a

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second opinion before you have surgery. You could also google the terms you don't understand.

Member 19

M19 is most valued for the information he provides in response to the questions of others. He also contributes unsolicited information and is greatly appreciated by many when he attends an IBD conference and learns that a particular drug used by many members will no longer be available in a dose that is approved by many of the US insurance companies. His post about this change in drug availability initiates a long thread with many members indicating that they will visit their doctors to update their treatment plans based on M19's news. M19 takes part in threads about symptoms and treatment, diet and the impact of IBD on lifestyle and employment. In addition to his thread about the change in drug dose availability he initiates other threads asking about symptoms and employment and is also active within threads that deal with specific male issues such as the impact of IBD drugs on male fertility. M19 primarily indicates value from posts that respond to his specific questions. His disease is active and he experiences constant pain and discomfort. His posts are typically quite factual, but sometimes he uses emotive language to express his distress.

I'm so stressed and I have tests tomorrow. I could just cry right now with the mental toll of it all. I'm so glad I have this forum of people who understand. Hugs to you all.

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While M19 asks for and receives advice and support, M13 and M36 do not. The high activity of M13 and M36 involves responding to requests for help from others and indicating that exchanges between others are valuable.

Discussion and Conclusion

Social Network Analysis (SNA) is used to explore the flow of value-in-context at the macro, meso and micro levels between members in an online health community. Despite a high level of activity within this 270 member social network, the macro-context analysis indicates that the receipt and creation of value is widely dispersed throughout a relatively sparse network. Results show that even newer and/or peripheral members of the network can receive value from the community experience and generate value for others. The core-periphery analysis identifies only 10 of 270 members, some of whom act in a stewardship role, indicating receipt of value only from the exchanges between others in their community. In other words when A asks for help and B responds, C indicates appreciation for B's response. C's appreciation is a public acknowledgement of B's response to A and is likely to provide additional value to B.

Within the meso context clique analysis identifies that value exchange occurs mainly between groups containing both experienced and newer members. This finding confirms the notion of stewardship as both newer and more experienced members respond to questions and deliver value in the process, with more experienced members indicating value from the efforts of newer members. The lack of "exclusivity" between the more experienced members is further

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confirmed by triad analysis, which identifies few bounded clusters that might indicate exclusivity in who captures value from the social network.

At the micro level we find that reciprocal ties occur primarily between newer and more experienced members. This does not mean that newer members ask questions and more experienced members respond as might be expected. The relationship being explored is that of value exchange, not general activity. Reciprocated exchanges mean that newer and experienced members are delivering value to each other. Profiling of three participants shows that some experienced members ask nothing of the community at a personal level but instead experience value from seeing their fellow community members collaborating together to provide information and support. In our example neither of the two members identified as acting in this stewardship role (M13 and M36) hold a formal position within the community (such as Monitor or Moderator), yet both are clearly important members and it is likely that their endorsement yields further value for the members involved in the exchange of information and support.

The stewardship role, identified both qualitatively and structurally in our study, is acknowledged in previous qualitative work as a form of community “encouragement” in an online health social network (Maloney-Krichmar & Preece, 2005). We argue that this role goes beyond merely “encouraging” and involves experienced members actively ensuring that newer members feel valued, and that the contributions of newer members are publicly validated. The stewardship role is additional to the role of provider of health knowledge identified by Hardey (1999). Consumers not only contribute valuable health information and support to one another in online communities, they also act as stewards and champions of the value co-creation process itself.

Limitations and Future Directions

In many ways an online health community is an ideal setting for research involving value co-creation within a social network as the ties between members are contained within the observable network and rarely, if ever, extend into the less accessible offline realm. As researchers we can see the full extent of ties between members. As observers though, we are limited by what the members reveal in their online setting and the value created within an online community may be far greater than what is revealed. Members may experience value without any indication and lurkers may experience value without revealing their presence to others. A limitation of SNA is the potential to overlook context due to the quantitative nature of the analysis. Paper 3 overcomes this limitation to a degree by supplementing the quantitative SNA with qualitative profiling. A further limitation is the way in which the relationship under analysis is measured, which may not capture the full extent of the relationship. Paper 3 measures the value co-creation relationship between participants in an online community, using the one-click response to posts to indicate that value has been co-created. This specific response may not indicate the full extent of value co-creation, and therefore potentially limits the findings. Additional qualitative work specifically targeted at identifying value co-creation within the online community could introduce greater depth into the results. Despite these limitations the techniques used for this study have merit in studies of both online and offline settings and can be supplemented by additional qualitative data collection when a more complete picture of value creation is required.

Our study considers membership length with the online community as a differentiating factor. We explore differences between members who have been

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involved in the community for six months or more and those who have recently joined. Other variables such as gender or age, if available, may provide additional insight. While online social networks are considered a global phenomenon, the community studied is clearly dominated by participants from the USA, followed by other developed nations such as Canada and the UK. Differences in value-creating practices between members from different countries may also prove a fruitful area for exploration.

Marketing scholarship increasingly recognizes value co-created within consumer collectives, and a number of conceptual studies propose how value is created within different types of collectives (Nambisan & Nambisan, 2009; Rihova, Buhalis, Moital, & Gouthro, 2013). This study recognizes that within a consumer collective sub-structures exist that interact with each other and impact upon value co-creation. Further work considering the ties between individuals and small groups will help to unpack the mechanics by which consumers co-create value for each other and inform future work exploring how consumers collaborate to create value not only for themselves but also for service providers.

Prior scholarship notes that contextual variables such as time, place and social setting influence how consumers connect directly and indirectly to firms and to one another, impacting access to resources and framing the value co-creation process (Akaka & Chandler, 2011). While our study responds to calls for empirical work in this area, we present analysis of just one social setting for a limited time period. A longitudinal study within other settings may demonstrate quite different patterns of value co-creation and considerable further work is required to understand the relationship between context and value co-creation within a variety of settings.

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CONCLUSION TO PAPER 3

Paper 3 takes a structural approach to exploring value co-creation between consumers within a social network. This approach supplements the qualitative analysis of online conversation between participants taken within Paper 2.

While Paper 2 identifies value co-creation through words exchanged and actions taken, Paper 3 identifies structural patterns of value co-creation between individuals and groups within the social network. Building upon recent scholarship that recognises value co-creation occurring within social relations between consumers, service providers and others (Akaka, Vargo, & Schau, 2015; Chandler & Vargo, 2011), Paper 3 brings the literature reviewed for this thesis up to date.

Papers 2 and 3 together comprehensively explore the co-creation of value between consumers in an online health community. The two papers identify types of value experienced by consumers undertaking a collective activity, consumer roles involved in value co-creation, and processes through which value is co-created. Attention now turns to a specific form of consumer value, spiritual value, recognised in the literature (Holbrook, 1999) but as yet underdeveloped. Paper 1 refers to a study by McColl-Kennedy et al. (2012) in which the co-creation of value within a healthcare context is linked to improved quality of life. Paper 4 builds upon that idea demonstrating that,

within an online health community setting, the co-creation of spiritual value can deliver improved quality of life.

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Chapter 5. INTRODUCTION TO PAPER 4

Papers 2 and 3 explore, qualitatively and structurally, how consumers co-create consumer value within an online health community. The two papers together establish online health communities as settings for the co-creation of consumer value. Paper 4 returns to a notion referenced in Paper 1, that co-creation of value within a healthcare context can contribute to quality of life (McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012).

Paper 1 introduces the concept of network value, “a form of value that consumers gain through participation in value-creating social networks” (Stewart Loane & Webster, 2014) and argues that existing consumer value typologies should be extended to include forms of value only experienced in a social context and specifically related to social interaction. Prompted by feedback from the Academy of Marketing Conference in 2013, the candidate began exploring the relationship between “network value” and Holbrook’s concept of spiritual value, as yet barely developed within the marketing literature (Holbrook, 1999).

Paper 4 begins with conceptual discussion, development and definition of both *communitas* and spiritual value. Both concepts are then operationalised within two studies. The first study takes a netnographic approach, using qualitative analysis of posts and interview transcripts collected from the same IBD

Chapter 5: Paper 4

community in Paper 2, identifying the potential for participants to experience *communitas* and spiritual value within the online community. The second study tests hypotheses that propose a relationship between *communitas* and spiritual value. A scale is developed to measure *communitas* and spiritual value within online community environments, also incorporating questions adapted from the McGill Quality of Life questionnaire (Cohen & Mount, 1995). The scale, administered to a panel of 530 online health community users from the UK, USA and Australia, tests the relationship between *communitas*, spiritual value and quality of life. Results indicate that participants can experience *communitas* through their online community, and that *communitas* is strongly related to spiritual value, which leads to improved quality of life.

Paper 4 makes a substantial theoretical contribution both in conceptual clarification of *communitas* and spiritual value and in development of a scale to measure both concepts. As both a practical and social contribution Paper 4 identifies online health communities as consumption spaces in which participants can experience spiritual value that contributes to quality of life. For health consumers the capacity to improve quality of life may be of critical importance and an online health community can play a role.

An early version of the theoretical component of this paper was presented at the Australian and New Zealand Marketing Academy Conference (ANZMAC) 2014 and was awarded Best Paper Overall. The conference paper was not published in the conference proceedings and is included in Appendix F.

Chapter 5: Paper 4

Paper 4, **Connecting with strangers: spiritual value, communitas and quality of life in online health communities**, was submitted to the *International Journal of Research in Marketing* on August 19, 2015 and is currently undergoing review. As such it is presented within this thesis in the format required by that journal. Figures and tables are embedded within the text for ease of reading.

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**Connecting with strangers: spiritual value, communitas and quality of life
in online health communities**

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ABSTRACT

This research presents two studies that develop and operationalise the concepts of communitas and spiritual value, testing whether they contribute to quality of life. Study 1, a qualitative analysis of posts to an online community for people who suffer Inflammatory Bowel Disease, identifies the potential for participants to experience communitas and create spiritual value for each other within the online community. Study 2 develops measures for communitas and spiritual value and uses SEM to analyse results of a quantitative panel survey involving 530 online health community users. Study 2 finds evidence of a significant relationship between communitas and spiritual value leading to quality of life. The two studies demonstrate that collective consumption experiences characterized by communitas can deliver spiritual value to consumers, leading to improved quality of life. This finding is of critical importance to those who suffer ill-health as it identifies potential benefits of participating in online health communities.

KEYWORDS

Spiritual, communitas, quality of life, consumer value, online health communities

1. Introduction

The current trend of utilising cultural approaches to study consumption experiences provides marketing scholars with a rich understanding of how consumers value and appreciate those experiences. A number of studies identify important consumption phenomena such as *communitas*, sacredness and spirituality (Arnould & Price, 1993; Belk, Wallendorf, & Sherry Jr., 1989; Celsi, Rose, & Leigh, 1993; O'Guinn & Belk, 1989; Schouten & McAlexander, 1995), yet few studies focus explicitly on the role of spirituality in consumption. Recent exceptions include two edited books relating to religion, spirituality and consumption (Gauthier & Martikainen, 2013; Rinallo, Scott, & Maclaran, 2013) and a special issue of the *Journal of Business Research* that explores the roles of religion and spirituality in consumer choices (Engelland, 2014).

Academic scholars use the term “spiritual” to refer to religious, new age or secular forms of transcendent experiences with recognition that forms of religion, including mainstream religions, and spirituality are dynamic constructs subject to changing social and market forces (Adorno, 1965; Rindfleish, 2005). Not only can consumer preferences and practices be influenced by their spiritual orientation (Luk et al., 2012; Skousgaard, 2006), consumers can develop spiritual or sacred feelings about items as mundane as flags, sporting memorabilia and home-made goods (Belk, et al., 1989) or consumption experiences such as owning and caring for a pet (Hill, Gaines, &

Wilson, 2008) or taking a vacation (Kwortnik Jr. & Ross Jr., 2007; Moal-Ulvoas & Taylor, 2014).

Marketers also refer to sacred aspects of some collective consumption experiences, describing these experiences as separated from normal daily life, often involving special rituals and group norms. Such experiences include riding with a motorcycle club (Schouten & McAlexander, 1995), skydiving (Celsi, et al., 1993), river rafting (Arnould & Price, 1993), playing golf (McGinnis, Gentry, & Gao, 2012), listening to illegal music (Kuruoğlu & Ger, 2014) and attending night-clubs (Goulding, Shankar, & Canniford, 2013). A common characteristic of such experiences is a feeling of “communitas” that develops between participants leading to heightened connectivity and intense social bonds (Turner, 1969). Collective experiences characterized by communitas are often described as being “sacred” in some way, a concept closely related to spirituality.

Few marketers recognize consumers’ spiritual or sacred reactions to consumption experiences as a form of consumer value, with the exception of Holbrook (1999) who explicitly recognizes spiritual value as a reaction to consumption. Holbrook’s concept of spiritual value has not been developed beyond his own work. Apart from the few examples provided within Holbrook’s introspective essays (Holbrook, 2005, 2006), no attempt has been made to measure spiritual value. Moreover, Holbrook claims that spiritual value is an end unto itself, a view echoed by Shaw and Thompson (2013) in a recent study of spiritual consumption. While these authors claim that spiritual value does not lead to additional, possibly beneficial outcomes, other authors

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find that a weightloss support group can be both a spiritual and therapeutic companion to its members (Moisio & Beruchashvili, 2010), and a further study of African-American women with breast cancer identifies spirituality as an important coping mechanism (Barg & Grier, 2008). The health and religious literatures also provide evidence that spiritual experiences can lead to benefits such as improved health and wellbeing (Miller & Thoresen, 2003; Pargament, 1997).

Although previous studies indicate tentative linkages between consumption, collective experience, spirituality and wellbeing, and a recent marketing study links collective experience directly with happiness and wellbeing (Bhattacharjee & Mogilner, 2014), none investigates the potential for consumption to deliver spiritual value that contributes to improved wellbeing or quality of life. The aim of this paper is to clarify the concepts of spiritual value and *communitas* and operationalize both within an online collective consumption context. Additionally, we are interested in whether participation in an online collective consumption experience, in this case a health community, can generate *communitas*, deliver spiritual value and contribute to improved quality of life. Our study extends the work of authors who identify spiritual connections between participants in an online fan club (Kozinets, 1997) and a brand community (Muniz & Schau, 2005), taking the notion of spiritual connection between online strangers into the realm of health and demonstrating that such connections can lead to increased well-being.

Our study has both theoretical and practical implications. We advance prior theoretical work on spirituality and consumption by: 1) proposing more

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detailed definitions of *communitas* and spiritual value, 2) advancing measurement of both concepts, building upon current measures of *communitas* and developing initial measures for spiritual value, 3) extending the study of spiritual connection between online strangers into the realm of health and 4) arguing that spiritual value is not necessarily an end to itself, proposing a conceptual model with *communitas* fully mediated by spiritual value, leading to quality of life. Of practical significance the notion that online collective consumption can influence the capacity for individuals experiencing poor health to rise above their illness and improve their situation has appeal given that online activity transcends what can be debilitating physical and geographic barriers. This study proposes that consumers who are members of supportive online social networks can utilize those networks as vehicles of transcendence in order to find hope, meaning and improved quality of life.

We begin by reviewing the literature to refine the concepts of spiritual value and *communitas* and propose definitions for both. We then present two studies investigating participation in online health communities as a form of consumption. One is a qualitative study based on an online community for people with Inflammatory Bowel Disease (IBD) and the second is a quantitative study involving a survey of people who actively use online health communities for a variety of different health conditions. Qualitative results indicate that participants within online health communities can experience *communitas* and spiritual value. Quantitative results confirm spiritual value and *communitas* as distinct constructs with a significant relationship between *communitas* and spiritual value leading to quality of life.

2. Literature

Our review of literature first considers the nature of spirituality, spiritual value and *communitas*, drawing upon scholarship from the disciplines of marketing, psychology, religion, health and anthropology. We then consider quality of life (QOL) as a potential outcome of spiritual value and present a conceptual model linking *communitas* through spiritual value to quality of life.

2.1 *Spirituality and sacredness in consumption*

Pargament, discussing the relationship between religion and spirituality, eloquently claims that spirituality is “a search for the sacred” (Pargament, 1997, p. 39). The idea that times, places and objects are sacred when “set apart” is a theme discussed in some detail by Belk, Wallendorf and Sherry (1989). Focusing primarily on consumption in a contemporary context, the authors differentiate between sacredness as a concept related to religion and sacredness of non-religious times, places and objects. Suggested examples of non-religious sacred items include flags, national parks, art, automobiles, museums and collections. Other authors see sacredness in the symbolism attached to photographs or other items that are reminders of happy times or significant events (Boztepe, 2007). Heirlooms are considered to have sacred associations to the deceased and may be kept in a special place within the home, only brought out during significant rituals such as a family Christmas dinner or wedding (Belk & Wallendorf, 1990). The characteristic of sacredness

comes from being set apart from the ordinary and seen as somehow “special” and revered.

While possessions are readily accepted as potentially sacred, recent scholarship describes “experiences” as being associated with sacred or spiritual feelings (Shaw & Thomson, 2013). Such experiences are described as uplifting, emotional and intense and may be overtly religious (Granger, Lu, Conduit, Veale, & Habel, 2014) or more secular such as a symphony performance (O’Sullivan, 2009). A number of scholars identify spiritual or sacred aspects of such secular consumption experiences as golf (McGinnis, et al., 2012), motorcycle club rides (Schouten & McAlexander, 1995), night-clubbing (Goulding, et al., 2013), river rafting (Arnould & Price, 1993), alternative lifestyle communities (Moraes, Szmigin, & Carrigan, 2010) and music camp (Ellis, 2011). Spiritual or sacred feelings are not limited to consumption experiences undertaken in a physical sense. Similar feelings are expressed by individuals participating in online communities formed around an abandoned technology product (Muniz & Schau, 2005), knife-making kits (Peters, Bodkin, & Fitzgerald, 2012), music (Ewing, 2008) and a television series (Kozinets, 1997). Authors describe feelings of connectedness, transcendence and meaning as outcomes from both online and physical collective consumption experiences.

While these studies find elements of spirituality within particular contexts, none defines spiritual value derived through consumption experiences. Holbrook (1999) is one of the few who explicitly examines the different types of consumer value, with spiritual value being one of the eight

value types identified. Other studies of consumer value do not explicitly recognize spiritual value but instead make reference to the less specific “emotional value” or “social value” (Chang & Dibb, 2012; Leroi-Werelds, Streukens, Brady, & Swinnin, 2014; Sánchez-Fernández & Iniesta-Bonilla, 2007).

Holbrook describes spiritual value as:

“... an intrinsically motivated acceptance, adoption, appreciation, admiration, or adoration of an Other where this “Other” may constitute some Divine power, some Cosmic Force, some Mystical Entity, or even some otherwise inaccessible Inner Being and where such an experience is sought not as a means to an ulterior end but rather as an end in itself prized for its own sake” (Holbrook, 1999, pp. 22-23).

For Holbrook spiritual value is a “reactive appreciation of a consumption experience prized for the intrinsically motivated sake of how it affects one’s relationship with some relevant ‘other’” (Holbrook, 2005, p. 58). A crucial component of Holbrook’s spiritual value is its reactive nature. Consumers gain spiritual value not through purposive action but through an intuitive response to a consumption experience that may be an active experience itself. Other scholarship refers to such reactions as implicit responses, identifying such responses as critical to understanding consumer preferences and thought processes (Nevid, 2010). Consumers who experience spiritual value recognize that something awe-inspiring has happened to them, something that is not

entirely under their control. Yet we are left wondering whether in fact benefits do follow from the receipt of spiritual value.

Holbrook's concept of spiritual value is an important first step, but open to further conceptual development. Holbrook claims that spiritual value is an end to itself, and that a search for spiritual value has no benefit other than the fulfilment of that search (Holbrook, 1999). The same idea is expressed by Shaw and Thomson (2013) who describe spirituality as a journey without concern for the destination. Despite general agreement amongst scholars that spiritual feelings or spiritual consumption may be disassociated with a pre-specified destination or outcome, the health and religious literature identifies important benefits associated with spiritual feelings such as meaning (Dickinson, 1975), the ability to cope with adversity (Hay, 1989), hope (Clark, Cross, Deane, & Lowry, 1991), peace (Steinhauser et al., 2006), connection with others (Newsham, 1998) and for those who are suffering ill-health, improved health and quality of life (Dickinson, 1975; Ross, 1995).

We build upon Holbrook's concept of spiritual value and propose that spiritual value delivers transcendence in the form of acceptance, comfort, reassurance, peace, hope, enlightenment or fulfilment, depending on the context and the situation of the individual. Transcendence may involve a humbling experience such as acceptance of donations given by anonymous benefactors during a period of financial hardship or it may be a calming experience such as a blessing from a Priest following diagnosis of an illness. Whatever the context, the consumer is reacting positively to an experience that

involves a relationship with some force or “other”. Accordingly, we revise the definition of spiritual value to recognize these important and varied outcomes:

Spiritual value is an emotional reaction to a consumption experience that connects consumers with something greater than themselves, providing transcendence, enlightenment and meaning.

2.2 *Communitas*

Communitas is a term used by Turner (1969) to describe an intense shared state that develops between individuals when they cast aside their normal daily roles and obligations and act within an atypical collective environment. Groups experiencing communitas are described as being in a liminal state whereby they leave behind their normal daily structure and expectations and enter a temporary state of “anti-structure”, an informal structure that exists alongside the formal, legal, social hierarchy more closely associated with social or kinship bonds. According to Turner (1969, p. 128), communitas is “almost always held to be sacred” as it transcends social norms and dissolves societal boundaries, leading to experiences of “unprecedented potency” or creativity. Similarly, Belk, Wallendorf and Sherry (1989, p. 7) see communitas as a property of sacredness, one that “frees participants from their normal social roles and statuses and instead engages them in a transcending camaraderie of status equality”.

Much of Turner’s work is set within the context of pre-industrial societies in which the sacred involves magic and totemism, with worship and

reverence accorded to natural phenomena (Belk, et al., 1989). Turner's early work provides few clues as to how the concept of *communitas* manifests in post-industrial societies other than a brief discussion of the hippie culture and its rejection of social norms and obligations in favour of personal relationships and sexual freedom (Turner, 1969, p. 112). In later work Turner (1983) argues that groups in pre-industrial societies usually experience *communitas* during periods of liminality whereas groups in post-industrial societies are more likely to find *communitas* during periods of leisure. Periods of both liminality and leisure are periods of time separated from the normal daily routine and therefore seen as special times that, when contributing to transcendence of the ordinary, can generate *communitas*.

Scholars who explore and develop the concept of *communitas* identify it in a number of contemporary contexts, most involving periods of leisure. Celsi, Rose and Leigh (1993, p. 12) see *communitas* between skydivers as the "sense of shared ritualistic experience that transcends ordinary camaraderie". Schouten and McAlexander (1995, p. 51) recognize *communitas* in the shared experience of Harley Davidson bikers described almost as a tribal ritual: "the formation moves like a single organism, the sound of a single motorcycle is caught up in a symphony of pipes, and individual identity is subsumed by the group". A river rafting experience provides a series of shared performances during which a sense of we-ness develops between participants, with the formal leadership roles of the guides subsumed by the integration of the guides into the overall experience (Arnould & Price, 1993). By way of contrast recent research describes a canoe trip during which participants move through periods of disunity and conflict before reaching a state of *communitas*

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(Lindberg & Østergaard, 2015). Communitas is also identified amongst nightclub patrons undertaking shared rituals whilst preparing to enter a club, then shedding their everyday selves and replacing their individual identities with that of the group (Goulding, et al., 2013). The authors reflect Turner's early work when portraying groups of clubbers as "tribes" and clubbing itself as characterised by a "disintegration of class and status" (p. 822). Other scholars see communitas developing in less adrenalin-charged activities such as an aged care facility, a music camp and an academic project team (Ellis, 2011; Sherry Jr., 1987; Spencer, Hersch, Aldridge, Anderson, & Ulbrich, 2001).

Communitas then is a social bond that develops between members of a group who are undergoing a special experience of some kind. The group must be in a liminal state in which dominant social structural roles and obligations are discarded and replaced with status equality or a less formal social structure. Members of the group often undergo some form of ritual in order to enter the liminal state. Drawing from the various interpretations of communitas in the literature, we define communitas as follows:

Communitas is a shared, liminal state resulting from active, directed engagement in an atypical, stimulating collective experience involving norms and rituals.

Both communitas and spiritual value provide consumers with a means of connection and transcendence, yet they are not the same. Communitas, always associated with active, collective experiences, is experienced while in a liminal state within a specific context and is therefore transcendent only

temporarily. Spiritual value is reactive, clearly personal and can provide a more permanent transcendence as the consumer's relationship with some greater force or omnipotent "other" is strengthened and appreciated. Such a profound connection can produce feelings of peace, comfort, humility as well as respect and can allow one to accept his or her own insignificance and place in life.

Given the proposed definitions and theoretical distinctions between spiritual value and *communitas*, we expect the two to be separate but interrelated multidimensional constructs. Specific characteristics of the collection context in combination with consumer attributes are likely to influence whether a consumer experiences *communitas* that delivers spiritual value. *Camaraderie* in a sporting activity is an example of *communitas* that may provide meaning and enlightenment for some, but not all, participants in the activity. Whilst recognising that not all collective consumption characterized by *communitas* delivers spiritual value, it is likely that at least some consumers who experience *communitas* also receive spiritual value. We therefore propose:

H1: *Communitas* has a positive association with spiritual value.

2.3 *Health and quality of life*

While marketing scholars claim that spiritual or sacred feelings are an end in themselves, studies in health, psychology and religion recognize a positive relationship between spirituality and quality of life (Egbert, Mickley, &

Coeling, 2004; Miller & Thoresen, 2003; Sheridan, 2013). Empirical evidence points towards improved quality of life (QOL) with higher levels of wellbeing for those who partake in spiritual or religious experiences (Koenig, 2004; La Barbera & Gürhan, 1997; Miller & Thoresen, 2003). Sodestrom and Martinson (1987) find that cancer patients utilize a variety of spiritual strategies in order to cope with their illness, including prayer, bible readings and access to spiritual leaders while a study of AIDS patients finds that those with a strong sense of connection with others report lower levels of distress from pain (Rosenfeld et al., 1996). Such studies measure spirituality or spiritual behaviours as a characteristic of the individual. In comparison our primary interest here lies in measuring the spiritual effect of collective consumption upon the QOL of individuals.

No single definition of QOL is in common use, and terms such as health status, physical and social functioning, well-being and vitality of the individual are often used interchangeably (Sirgy et al., 2006). Within the health literature QOL and health are linked through the concept of health-related QOL or HR-QOL (Kaasa & Loge, 2003). HR-QOL is recognized as a complex construct influenced by factors as varied as a patient's coping, optimism, self-control and self-concept (Allison, Locker, & Feine, 1997). Cohen and colleagues, responsible for a substantial body of empirical work associated with HR-QOL (Cohen, Hassan, Lapointe, & Mount, 1996; Cohen et al., 1997; Cohen, Mount, Strobel, & Bui, 1995), define the construct only as "subjective well-being," implying that well-being can be sourced from any dimension reported by the individual. The constitution of the World Health Organisation defines HR-QOL as "a state of complete physical, mental, and social well-being not merely the

absence of disease” (World Health Organisation, 1997). Paradoxically patients with serious illness sometimes rate their quality of life more highly than control groups in good health indicating that HR-QOL is related to factors other than symptoms and health status (Evans, 1991; Irwin, Gottlieb, Kramer, & Danoff, 1982).

Evaluating HR-QOL across a varied population is not without challenges, not the least because QOL is a highly subjective self-assessment. Moreover, during periods of illness HR-QOL can be variable. Cohen and Mount (1992) recognize four dimensions of HR-QOL, physical, psychological, support and existential. The physical dimension measures the impact of symptoms on physical functioning and well-being while the psychological dimension measures state of mind. The support dimension measures the extent to which an individual feels connected and cared for by others and the existential dimension represents purpose and meaning in life, addressing concerns of the individual relating to meaning, fulfilment, personal worth and personal control (Cohen & Mount, 1995; Cohen, et al., 1997; McColl-Kennedy, Vargo, Dagger, Sweeney, & van Kasteren, 2012). As our study relates to spiritual and collective consumption experiences, we focus on the support and existential dimensions of HR-QOL as these explicitly involve connecting with others and achieving meaning and purpose in life.

When someone receives spiritual value, then undergo an emotional transformation, one that brings understanding, appreciation and acceptance. Such feelings of deep attachment and wonderment may not provide material assistance to improve physical health and functioning, but research suggests

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such experiences may be of greater importance and are associated with better coping especially for those in poor health with chronic or terminal illness (Koenig, 2004). Research in health considers spiritual well-being an important indicator of QOL and is one of the factors included in life satisfaction measures (Sirgy, et al., 2006). Such support leads to the following hypotheses:

H2: Spiritual value has a positive relationship with both a) support HR-QOL and b) existential HR-QOL

Communitas is characterized by intense collective consumption experiences and is almost always held to be sacred (Belk, et al., 1989; Turner, 1969), a concept closely related to the spiritual. Few studies recognize those links as potentially contributing to quality of life, an exception being a study of communitas within a nursing home setting in which the close bonds between residents contributes to increased well-being (Spencer et al., 2001). While some scholars see periods of liminality, especially those associated with major life transitions, as potentially disruptive (Noble & Walker, 1997) we argue that intense collective experiences may give a new perspective and direction to one's life. As such, we propose the following:

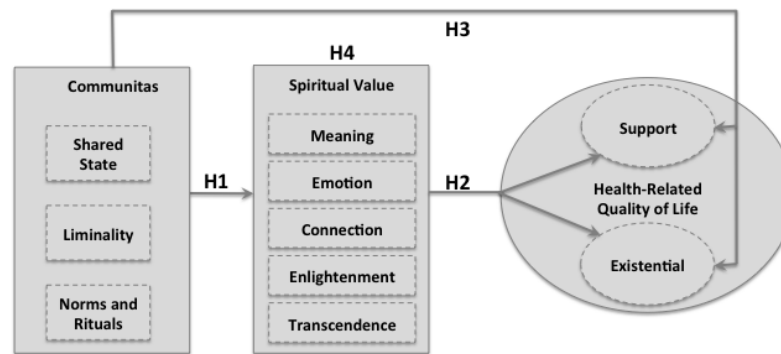
H3: Communitas has a positive relationship with both a) support HR-QOL and b) existential HR-QOL

A recent study by McGinnis et al. (2012) finds evidence that *communitas* is positively associated with feelings of sacredness. Other studies similarly describe the spiritual or sacred reactions of consumers to collective experiences characterized by *communitas* (Celsi, et al., 1993; Schouten & McAlexander, 1995). We argue that these spiritual or sacred reactions to collective consumption experiences represent receipt of spiritual value. At the same time scholars identify positive theoretical and empirical links between spirituality and HR-QOL (Cohen & Mount, 1995; Sirgy, et al., 2006). We therefore hypothesize that the relationship between *communitas* and HR-QOL is mediated by spiritual value. In other words spiritual value is the mechanism by which collective consumption experiences characterized by *communitas* can positively influence HR-QOL.

H4: Spiritual value acts as a mediator between *communitas* and both a) support HR-QOL and b) existential HR-QOL

2.4 Conceptual Model

Our conceptual model (Figure 1) proposes that collective consumption experiences characterized by *communitas* deliver spiritual value which is associated with higher quality of life along the support and existential dimensions. As such, spiritual value is the mechanism by which *communitas* leads to improved quality of life.

Figure 1. Relationship between *communitas*, spiritual value and HR-QOL

Little quantitative research examines the concepts of *communitas* and spirituality within the context of consumer behaviour. Following Shaw and Thomson (2013), we begin our research with an exploratory qualitative study to identify the potential for *communitas* and spiritual value to occur naturally within our chosen research context: online health communities. Online health communities are potentially suitable settings due to the close bonds that develop between individuals sharing what can be a life-changing health challenge (Hoffman, 2009). Moreover research identifies face-to-face support groups as settings for spiritually-based companionship between participants (Moisio & Beruchashvili, 2010), which suggests the potential for online support groups to exhibit the same or similar characteristics. We test the theoretical contribution of the qualitative study (Study 1) with a quantitative study (Study

2) that surveys a panel of individuals who participate in a variety of different online health communities.

3. Study 1

Study 1 is a qualitative study incorporating content analysis of posts to an online forum and a series of semi-structured interviews. The aim of Study 1 is to understand the online community experience from the perspective of the participants with regards to evidence of *communitas* and spiritual value co-created between participants.

3.1 Context

Study 1 is set within the context of an online health community for patients with Inflammatory Bowel Disease (IBD), a chronic illness with no known cause affecting all parts of the digestive system. IBD causes inflammation of the intestines leading to long-term chronic disability (Centers for Disease Control and Prevention, 2014). The two most common forms of IBD are Crohn's Disease (CD) and Ulcerative Colitis (UC). All forms are characterized by persistent diarrhoea, abdominal pain, cramping, rectal bleeding and fatigue, affecting employment, study and personal relationships (Crohns and Colitis UK, 2004-2012). A recent European study estimates around 2.5-3million people suffer from IBD with an annual total disease burden of around 4.6-5.6 billion Euros or 6.2-7.6 billion USD (Burisch, Jess, Martinato, & Lakatos, 2013). American data indicate the burden of

disease in the USA to be \$2.22 billion USD including both direct and indirect costs (Crohns & Colitis Foundation of America, 2014).

An online health community for sufferers of IBD, www.crohnsforum.com, was selected as the context of Study 1 due to its large and active international membership of more than 200,000 participants. Registration is required to post to the site and to see certain member-only information, but access to most areas of the community site is available to all. In addition to standard discussion forums the website includes a platform for rating and reviewing doctors, and a wiki to which participants may add material about drug treatment, surgery, alternative treatments, side effects and other topics of interest to IBD patients.

3.2 Method

Initial contact with the online community was made with the site Administrator, who consulted with key members of the online community before giving permission for the study. Kozinets' (2002, 2010) netnographic method was closely followed, with data gathered through online interviews and participant content posted to the community forum. Special attention was paid to the ethics of collecting online user-generated content (Bruckman, 2006; Kozinets, 2010)

Posts and threads were coded with Nvivo 10 (QSR International Pty LTD, 2011) using a grounded approach (Strauss & Corbin, 1990), allowing themes and discussion topics to emerge from the data. Discussion topics included topics such as "surgery" and "symptoms" whilst themes included

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“Living with IBD” and “Empowerment.” Posts were then coded a second time, looking for evidence of *communitas* or that participants had experienced some form of spiritual connection. Text-based responses expressing a spiritual or emotional connection with the community were identified as potentially indicating spiritual value. Posts indicating the liminal nature of the online community experience, or the presence of norms and rituals were considered potential indicators of *communitas*. While some level of researcher subjectivity is inevitable, increased objectivity was introduced through the assistance of doctoral students who independently re-coded the posts with more than 90% inter-coder reliability calculated using Nvivo’s inbuilt percentage agreement and Cohen’s kappa measures (Rust & Cooil, 1994). Differences in coding were discussed and resolved between the lead researcher and the independent coders.

Semi-structured online interviews were conducted via email over a period of four months with ten volunteer community members. Interviewees were asked about their history with this and other online communities, how they used the community forums, the reliability of advice given and a number of questions relating to the social bonds between community members. Interviewees were located in the UK, USA, Canada and Australia and the use of email provided the research team with access to a geographically dispersed population at minimal cost (Kivits, 2005), with the added advantage of a transcript in the form of an email trail, immediately available to both interviewer and interviewee. Interview timeframes ranged from four days to eight weeks depending on the other commitments of the interviewee. Interviewees were encouraged to take time to consider and frame their

responses, an approach that, while extending interview timeframes, provided a rich and well-considered dataset of opinions and comments. With ongoing access to the email trail, interviewees were also able to refer back to earlier questions and responses and provide additional information or update earlier responses.

3.3 *Study 1 Results*

We begin the results with examples of spiritual expression and emotion evident within posts. We then consider the notions of connection and liminality, which are related to both spiritual value and *communitas*. Spiritual value provides a connection to something greater and uplifting while *communitas* encourages a sense of belonging to a special group set apart. We then explore specific instances of norms and rituals associated with *communitas*.

Spiritual Expression

Most interviewees use quasi-religious terminology when referring to their relationship with the online community. The community is seen as a powerful force, a guide on a journey, an opportunity for fellowship, and a source of comfort and hope.

I can offer what I know to others, and helping someone else even if you are too sick to leave your own home is a very powerful force. It is self-healing to be able to help others even when you are at your worst. (C085, Female, Canada)

I have travelled a long path with an amazing group of supportive people without whom I'm not sure I would have made it. I feel so lucky that you have all shared so much and that I have been able to benefit. (C222, Female, Australia)

Participants regularly offer prayers of support and express thanks for the prayers received. One writes that the prayers mean a great deal to her. A number of participants refer to their time with IBD as a journey, and the other participants as fellow-travellers. One interviewee (Female, Australia) looks back at her posts and sees them as a travel diary that describes how far she has come. She describes the posts of others as “reflections” that provide hope on her darkest days indicating that the online community is an important aspect of her journey from despair to acceptance.

Emotion

Despite all communication taking place through text, many participants indicate an emotional reaction to the online community with expressions such as

Thank God for this forum of people who understand. Hugs to all. (C019, Male, USA)

My heart goes out to you. That's no way to live. (C075, Female, UK)

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Some participants use the online community as a safe place in which to vent frustration and anger about their disease or perceived poor treatment from medical staff. Such posts are inevitably received with responses that include sympathy, compassion and caring language.

This is the most miserable I've been since this all started . . . for the past year I've had no quality of life. I'm suffering here and I'm crying for the first time in a while. (C002, Female, USA).

Other participants express emotions such as joy and happiness when other participants identify a solution to a health or personal problem. Participants are also able to send “hugs” to one another with a single keystroke. “Hugs” are attached to the post along with the pseudonym of the hugger.

Connection

Interviewees were asked what initially drew them to the online community. Some join to find information about IBD, and connections to others are a consequence of their information search. Others join specifically to make connections with fellow-sufferers.

I don't have any friends with Crohn's and sometimes it's just good to go to a place where other people know what you've gone through/are going through. I also like to be able to help out people who are newer to the "Crohn's experience" because it was pretty

frightening for me at the beginning and I don't want them to feel so confused. (C053, Female interviewee, USA)

Participants also express their sense of connection to a wider community of sufferers. For one female interviewee from Australia (C086) being connected “made such a difference to [her] recovery as she did not feel so alone.”

The connection between members can extend beyond the shared experience of IBD as demonstrated by one participant who finds she has been misdiagnosed. Rather than moving on and finding a different community associated with her new diagnosis she elects to remain with www.crohnsforum.com a group she likens to family.

I'm no longer one of you. But I'm still going to stick around here because you are all my brothers and sisters. (C078, Female, USA)

Liminality

Participants move between their social networks of family and friends who cannot understand how it feels to suffer with IBD, and the online community of fellow-sufferers with whom they have a special understanding forged through common experience. In this way the online community takes on the role of a liminal consumption experience, enabling participants to temporarily transcend their daily lives and move into a virtual space shared in fellow-sufferers where they experience a sense of we-ness and a bond based

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around common support needs. Participants in the community also see themselves as a special group set apart from those who do not suffer from IBD.

Oh yes we are sooo lucky ha ha. We see things that no one in their right mind would ever want to see and we experience what no one else experiences. (C455, Female, UK)

I agree. I don't even think my family appreciates what it's like. (C464, Female, UK).

Some people are understanding, others less so. I find the more I come here for support with people who "get it" the less frustrated I feel with those on the outside. (C534, Female, Canada).

Norms and Rituals

The presence of norms and rituals is detected through overt specification of community rules as well as the behaviours of more experienced community members. Some norms and rituals are codified within the community rules.

For example the community rules state:

This community is not a substitution for medical advice or treatment and all questions or emergencies regarding your condition should be brought to the attention of a medical practitioner immediately.

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Experienced participants reinforce this “rule” by regularly encouraging others to seek the advice of their doctors. A standard participant response to a request for help may include an expression of empathy, an attempt at diagnosis, a treatment option and a suggestion that the person requesting help see their doctor for confirmation and clarification.

I'm so sorry to hear you are suffering. Maybe speak to your doctor and see if you can get started on prednisone. Have you ever tried Imodium for diarrhea? There has got to be something you can take to calm it down. See if you can get an earlier appointment. Maybe call them and start crying on the phone. Tell them you are desperate and suffering. (C001, Female, USA).

Other norms include providing citations for treatment information shared between participants and asking others to cite such information when they neglect to do so.

Really? Pure oxygen can heal a fistula? I'm open to alternative treatments but I've never heard of this one. Have there been any scientific studies done on this? (C019, Male, USA).

Rituals are more difficult to detect and may be individual to each participant. By way of example one interviewee described her daily ritual of checking the latest posts (which can be viewed on a special menu item) before going through older requests for help to ensure they had all been answered. Other participants are likely to have their own rituals during their time with

the online community. One group ritual noted is that of posting “My Story” when a participant first joins the community. These stories allow a new participant to introduce his or herself and write what can be a lengthy story about the onset of their disease and their eventual diagnosis. The “My Story” ritual serves a number of purposes. Firstly these stories are posted in a special place within the community website, preventing them from cluttering up the question-and-answer sub-forums. Secondly, the posting of a personal story about one’s own health and body acts as a type of testimonial and an initiation into the community. Experienced participants respond to these stories asking for more details, a practice that encourages the new member to continue posting in order to answer the questions. Thus “My Story” becomes a gateway to community membership, serving as a transition from observation to active participation.

3.4 Conclusion to Study 1

Posts and interviewee comments indicate that while participants may initially use the online community as a source of information and advice, some eventually see it as a source of inspiration and hope, indicating a spiritual reaction to the online community experience. Liminality and the connection between participants allow participants to transcend their daily lives, participating in “special time”, set apart and shared only with those who understand what it means to suffer the symptoms of IBD. The third dimension of *communitas*, the presence of norms and rituals, is detected through overt

specification of community rules as well the behaviours of more experienced community members.

Study 1 findings are summarised in Table 1, providing evidence that participation in an online health community can be characterized by *communitas* and deliver spiritual value to participants. To test these findings across a variety of online health communities relating to different health conditions we administer a questionnaire to a panel of online health community users across the USA, UK and Australia.

4. Study 2

Study 2 builds on prior literature and the results from Study 1 to develop quantitative measures of spiritual value and *communitas* and test our conceptual model across a variety of different online health communities. Adapting scale items from prior studies of spirituality and *communitas*, we develop items that measure five dimensions of spiritual value and three dimensions of *communitas* within the consumption context of online health communities. We use structural equation modelling, first to determine the measurement model and then to test whether collective consumption experiences characterized by *communitas* deliver spiritual value leading to support and existential quality of life.

Table 1. Qualitative evidence of spirituality and communitas within the online community

Concept	How represented	Examples
Spirituality	Spiritual expression	<ul style="list-style-type: none"> - quasi-religious terminology - offers of prayer - references to a “journey” and “fellow travellers”
Spirituality	Emotion	<ul style="list-style-type: none"> - Expressions of joy and happiness in response to others’ posts - Effusive language referring to emotional feelings - Expressions of anger and frustration directed at those outside the community
Spirituality/ Communitas	Connection	<ul style="list-style-type: none"> - Acknowledgement of bonds with other participants - Participants revealing a sense of shared experience with others - Participants claiming a close bond, akin to family
Spirituality/ Communitas	Liminality	<ul style="list-style-type: none"> - References to the community as set apart from the real world - Descriptions of the community as a refuge or safe place
Communitas	Norms and Rituals	<ul style="list-style-type: none"> - Explicit community rules - Tacit norms encouraged and modelled by experienced participants - “My Story” Ritual - Other rituals are likely to be specific to each participant

4.1 Measurement development

Our literature review identifies a substantial body of scholarship within the disciplines of health and religion exploring spirituality and the QOL benefits gained from spiritual experiences. Health-related quality of life (HR-

QOL) is measured using two dimensions of the McGill Quality of Life scale (Cohen, et al., 1997), Support (two items) and Existential 9 (six items). All eight HR-QOL items use a ten point semantic differential scale.

Existing spirituality scales measure the religious or spiritual orientation of the individual (Farran, Miller, Kaurfman, Donner, & Fogg, 1999; Hay, 1989; Kass et al., 1991; Piedmont, 1999; Underwood & Teresi, 2002), whereas our study measures the spiritual benefits from participation in a consumption experience. The stimuli for the 17 items designed to measure the five dimensions of spiritual value come from multiple sources. Two items adapted from the Inventory of Positive Psychological Attitudes (Kass, et al., 1991) measure meaning and two more measure transcendence. One item adapted from the Daily Spiritual Experience Scale (Underwood & Teresi, 2002) measures emotion, three measure connection and two transcendence. From the Attitudes Towards Caregiving Scale (Farran, et al., 1999) one item measures meaning and another enlightenment. Five additional items were developed for this scale based on common understandings of terms found in internet content relating to spirituality and enlightenment^[i]. Thirteen items use a seven point scale and four use ten point semantic differential scales.

The three dimensions of *communitas* are measured with 14 items adapted and developed from a variety of sources. Five items adapted from McGinnis et al. (2008) measure feelings of belonging and connection, referred to as “shared state” to avoid confusion with the connection dimension of spiritual value. Prior studies addressing liminal states typically do not involve measurement of the concept (for example see Caldwell, Kleppe, & Henry,

2007), an exception being a study by Lippman et al. (2007). One item is adapted from Lippman et al. (2007) and a further two are developed specifically for this study based on qualitative work by Schouten and McAlexander (1995). Development of six items relating to norms and rituals follows the context-specific approach adopted by prior ritual studies (Oswald, 2002; Walter, 2003). One item is based on an earlier study of an online community (Nambisan & Baron, 2009) while another five items are based on qualitative work within an online community context (Stewart Loane & D'Alessandro, 2014; Stewart Loane, Webster, & D'Alessandro, 2014). All items use a seven point scale. Techniques used to reduce common method bias include reversing some questions, using questions from different scales in literature and varied response formats (Podsakoff, MacKenzie, & Lee, 2003).

4.2 Method

The survey was administered to an online panel of individuals with a variety of physical and mental health conditions living in the USA, UK and Australia and viewed by 3244 individuals. Of these, 614 eligible respondents indicated they use and post to an online community relating to their health condition. Of the 614 survey attempts, 83 were incomplete and one appeared to use a keystroke pattern. Those 84 responses were deleted from the sample, leaving a dataset of 530 responses, 180 (34%) from the USA, 163 (31%) from the UK and 187 (35%) from Australia. Two thirds of respondents (66.6%) reported permanent or non-curable health conditions with the remainder reporting conditions that they expect to be temporary, such as pregnancy.

Structural equation modelling (SEM) using the partial least squares method available in SmartPLS (Ringle, Wende, & Becker, 2014) was used to construct first order variables and test the overall conceptual model. PLS is primarily used for theory development and is therefore appropriate for this study which explores previously untested relationships between constructs (Hair, Ringle, & Sarstedt, 2011). As a non-parametric estimation procedure, PLS is also practical and less restrictive than using maximum likelihood estimations (Hair, Hult, Ringle, & Sarstedt, 2014). Additionally, Smart-PLS allows for reflective-formative constructs comprising multiple dimensions to be modelled (Becker, Klein, & Wetzels, 2012).

4.3 *Results*

Structural equation modelling (SEM) using the partial least squares method available in SmartPLS (Ringle, et al., 2014) is used to conduct preliminary analysis of the measurement model and remove unsuitable measurement items. After removal of 14 items due to loadings less than 0.7 or cross-loadings greater than 0.7 the final measurement model results in a one-dimensional construct for spiritual value measured with five items, one item each for meaning, emotion, connection, transcendence and enlightenment. Communitas is a three-dimensional construct with three items for shared state, two for liminality and three for norms and rituals. Internal consistency, measured using Cronbach's alpha (CA), composite reliability (CR) and convergent validity measured with average variance extracted (AVE), are all above 0.7 (Table 2) suggesting that all constructs demonstrate satisfactory

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internal consistency, composite reliability and convergent validity. Following analysis of the measurement model, we construct a formative second-order latent factor for *communitas* using the repeated indicator approach in which the second-order variable constitutes both the manifest variables and the first-order reflective latent variables (Becker, et al., 2012). Discriminant validity output is assessed for independent latent variables using the Heterotrait-Monotrait ratio (HTMT) and is found to be satisfactory ($HTMT < .85$), confirming the independence of the latent variables (Henseler, Ringle, & Sarstedt, 2015).

Table 2. Measurement model and validity measures for first-order reflective constructs

Reflective Constructs and Indicators ^a	Factor Loadings	Mean	SD	CA ^b	CR ^c	AVE ^d
<i>Spiritual Value</i> (1-7 Likert scale)				.909	.932	.733
Talking online with others who share my challenges restores my faith in my own abilities (Meaning)	.868	2.55	1.24			
The online forum gives me joy (Emotion)	.871	2.97	1.35			
Participating in the online forum gives me a sense of inner peace (Connection)	.874	2.94	1.27			
When I participate in the online forum I feel less trapped by my situation (Transcendence)	.811	2.86	1.32			
The online forum makes me aware of what's important in life (Enlightenment)	.855	2.63	1.25			
<i>Communitas - Shared State</i> (1-7 Likert scale)				.886	.929	.814
When I participate in this online forum I feel:						
In harmony with the other participants	.903	2.48	1.21			
A sense of sharing with the other participants	.922	2.27	1.19			
Camaraderie with the other participants	.881	2.63	1.29			
<i>Communitas - Liminality</i> (1-7 Likert scale)				.881	.944	.894
The online forum gives me a temporary place away from my daily struggles	.950	2.84	1.38			
When using the online forum I go into a different world from my everyday life	.941	3.24	1.54			
<i>Communitas - Presence of Norms and Rituals</i> (1-7 Likert scale)				.876	.923	.801
Members of the online forum place considerable importance on:						
Standards of behaviour that all participants are expected to follow	.891	2.12	1.10			
Welcoming new members	.908	2.13	1.14			
Sharing personal experiences relating to their health	.886	2.08	1.04			

Table 2. Measurement model and validity measures for first-order reflective constructs cont.

Reflective Constructs and Indicators ^a	Factor Loadings	Mean	SD	CA ^b	CR ^c	AVE ^d
<i>Communitas - Presence of Norms and Rituals</i> (1-7 Likert scale)				.876	.923	.801
Members of the online forum place considerable importance on:						
Standards of behaviour that all participants are expected to follow	.891	2.12	1.10			
Welcoming new members	.908	2.13	1.14			
Sharing personal experiences relating to their health	.886	2.08	1.04			
<i>HR-QOL support</i> (1-10 semantic differential scale, all reversed)				.837	.924	.859
Over the past two days:						
The world has been an impersonal unfeeling place...caring and responding to my needs	.935	4.95	2.37			
I have felt supported. Not at all ... completely	.919	4.32	2.47			
<i>HR-QOL existential</i> (1-10 semantic differential scale, all reversed)				.886	.943	.769
Over the past two days my life has been:						
utterly meaningless and without purpose ... very purposeful and meaningful	.893	4.35	2.35			
Over the past two days, when I thought about my whole life, I felt that in achieving life goals I have:						
made no progress whatsoever ... progressed to complete fulfilment	.894	4.92	2.37			
When I thought about my life to this point, I felt that my life to this point has been:						
completely worthless ... very worthwhile	.909	4.29	2.25			
Over the past two days I have felt that I have:						
no control over my life ... complete control over my life	.850	4.98	2.47			
To me the past two days were a burden ... a gift	.838	4.86	2.45			

^a Statistical measurement reliability for formative constructs (ie. *communitas*) is not applicable (Hair, et al., 2014), so only reflective construct reliability is are reported

^b Cronbach's alpha threshold > 0.7 (Nunnally & Bernstein, 1994)

^c Composite reliability threshold > 0.7 (Hair, et al., 2014)

^d Average Variance Extracted threshold > 0.5 (Hair, et al., 2014)

Table 3 shows the correlations between latent variables indicating a strong relationship between spiritual value and communitas as well as between spiritual value and the three individual dimensions of communitas. Weaker but significant relationships exist between the two HR-QOL subscale dimensions and both spiritual value and communitas. The strong relationship between spiritual value and communitas, coupled with the satisfactory HTMT score assessing discriminant validity, provide support that spiritual value and communitas are distinct yet interrelated constructs.

Table 3. Correlations between constructs

		1.	2.	3.	4.	5.	6.
1.	HRQOL-Support	-	-		-	-	-
2.	HRQOL-Existential	.822**	-		-	-	-
3.	Spiritual Value	.241**	.178**				
4.	Total-Communitas	.204**	.141**	.840**			
5.	Shared-State	.224**	.155**	.729**	.868**	-	-
6.	Liminality	.143**	.097*	.754**	.898**	.642**	-
7.	Norms and Rituals	.174**	.119**	.646**	.769**	.645**	.488**

** significant at the 0.01 level (2-tailed), * significant at the 0.05 level (2-tailed)

Table 4 presents results for six structural models (SM1-SM6) used to test Hypotheses 1-4. We initially test the relationship between communitas and spiritual value (H1) and find a significant and positive relationship between spiritual value and the second-order communitas variable (SM1) as well as with each of the individual dimensions of communitas (SM2). The relationship between communitas and spiritual value indicates a potential

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multicollinearity issue but the collinearity statistic VIF is below the threshold of 5 for all variables indicating that multi-collinearity is not a factor (Hair, et al., 2011). Having established a positive relationship between the two independent variables, spiritual value and *communitas*, we turn our attention to the relationships between the independent variables and the dependent variables HR-QOL support and HR-QOL existential.

H2 proposes a relationship between spiritual value and HR-QOL (SM3). The relationship is positive and significant for both dimensions of HR-QOL and we therefore accept H2a and H2b. Two structural models test the relationship between *communitas* and HR-QOL (H3). SM4 tests the relationship between the combined second-order *communitas* variable and the two HR-QOL dimensions. Results show positive and significant relationships in both cases. SM5 tests the relationship using the three separate dimensions of *communitas*. Only shared state has a significant positive relationship with the two dimensions of HR-QOL. The relationships between the other dimensions of *communitas*, liminality and the presence of norms and rituals, are not significant. Based on results using SM4, we accept H3, that *communitas* has a positive and significant relationship with HRQOL support (H3a) and HRQOL existential (H3b).

The final, saturated, model (SM6) tests H4, spiritual value mediates the relationship between *communitas* and the two dimensions of HRQOL and including both direct and indirect paths from *communitas* to the QOL dimensions. Despite a significant direct relationship between *communitas* and the two HR-QOL dimensions (H3, SM4), only the mediated path via spiritual

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value is significant within the saturated model. We therefore accept H4a and H4b and recognize the relationship between *communitas* and HR-QOL as fully mediated by spiritual value. A Sobel test (Preacher & Leonardelli, 2010) provides additional support for spiritual value as mediator between *communitas* and both HR-QOL support ($z' = 4.80, p < 0.01$) and HR-QOL existential ($z' = 2.39, p < 0.05$).

PLS-SEM lacks a global goodness-of-fit statistic and models are typically evaluated based on prediction-oriented measures (Hair, et al., 2014).

Predictive accuracy is measured using R^2 , included in Table 4. The saturated model (SM6) explains 26% of the variance in the two QOL dimensions.

Predictive relevance on reflective latent constructs is measured using a Q^2 statistic which, if greater than zero indicates that the model exhibits predictive relevance. Q^2 for spiritual value (.517), HRQOL support (.052) and HRQOL existential (.025) all indicate predictive relevance of the model. Blindfolding with omission distance = 7 provides evidence of a small but positive predictive relevance for spiritual value within SM6 ($q^2_{\text{HRQOL-Support}} = .02, q^2_{\text{HRQOL-Existential}} = .01$). Similarly the f^2 statistic (effect size) indicates that spiritual value has a small positive effect on HRQOL support (.01) and HRQOL existential (0.2).

Table 4. Hypothesis tests using six structural equation models

	Path co-efficients (t-values)					
	SM1	SM2	SM3	SM4	SM5	SM6
Communitas -> Spiritual-Value	.828 (54.023)**	-	-	-	-	.828(52.87)***
Shared State -> Spiritual-Value	-	0.273(5.05)***	-	-	-	-
Liminality -> Spiritual-Value	-	0.481(11.134)***	-	-	-	-
Norms/rituals -> Spiritual-Value	-	0.202(4.18)***	-	-	-	-
Spiritual-Value -> HRQOL-Support	-	-	.265(5.671)***	-	-	.267(3.052)**
Spiritual-Value -> HRQOL-Existential	-	-	.195(4.139)***	-	-	.220(2.376)**
Communitas -> HRQOL-Support	-	-	-	.204(4.233)***	-	-.016(.204)
Communitas -> HRQOL-Existential	-	-	-	.143(3.050)**	-	-.041(.467)
Shared State ->HRQOL-Support	-	-	-	-	.168(2.51)*	-
Shared State ->HRQOL-Existential	-	-	-	-	.095(1.426)	-
Liminality -> HRQOL-Support	-	-	-	-	.014(.907)	-
Liminality -> HRQOL-Existential	-	-	-	-	.060(.117)	-
Norms/Rituals -> HRQOL-Support	-	-	-	-	.060(.991)	-
Norms/Rituals -> HRQOL-Existential	-	-	-	-	.048(.977)	-
Average R ²	.69	.69	.05	.03	.05	.26

***p<.001, **p<.01, * p<.05

5. Discussion

The qualitative results in Study 1, based upon online discussion between people with chronic IBD, indicate that participants see themselves as set apart from others, a special group with special needs. Finding others who share their suffering and understand their pain creates social ties through which are delivered hope, a sense of we-ness, an escape from day-to-day challenges and improved quality of life. The contribution of the online community experience to improved quality of life is best expressed by the Canadian participant who claims that providing support to others is “self-healing.”

Our study is not the first to identify a spiritual connection between online community participants, but it is the first to identify such a connection between participants who share a difficult and challenging experience rather than a shared passion for a brand (Muniz & Schau, 2005) or pleasurable interest (Kozinets, 1997). The participants at www.crohnsforum.com share information about their own bodies and some of their most intimate physical functions. Many are sharing their stories with strangers because they are unable to participate in such conversations with family and friends. The online community is a safe haven in which one need not be embarrassed and where one does not have to remind others about daily suffering. Participation provides an escape from daily living and a satisfying shared experience that contributes to an improved quality of life.

Our quantitative study confirms these findings across a population of individuals with a variety of different health conditions. Results indicate that spiritual value and *communitas* are distinct but strongly correlated constructs, both also correlated with the support and existential dimensions of HR-QOL (Table 3). The individual dimensions of *communitas* are each significantly correlated with the HR-QOL dimensions, but only shared state exhibits a direct and significant relationship with HR-QOL, and only with the support dimension of HR-QOL (SM5). A significant relationship between shared state and HR-QOL support is unsurprising given the health literature repeatedly points to links between feelings of connectedness, spirituality and quality of life (Carrington, 2013; Clark, et al., 1991). Shared state in itself does not constitute *communitas*, but when experienced within a liminal state involving ritualistic behaviours contributes to the experience of *communitas*.

As *communitas* is a significant predictor of spiritual value (H1) and spiritual value is a significant predictor of HR-QOL (H2) our model predicts that spiritual value will at least partially mediate the relationship between *communitas* and HR-QOL. We find that spiritual value fully mediates the relationship between *communitas* and the two dimensions of HR-QOL (SM6). In other words, some collective experiences characterized by *communitas* generate spiritual value that contributes to health-related quality of life. Based on effect and predictive relevance statistics, and consistent with weak correlations between constructs, the contribution of spiritual value to the two quality of life dimensions is relatively small, at least within this context. Given that this sample is experiencing spiritual value from collective activities with online strangers a small effect is understandable and further work should test

the relationships within other contexts. Of critical importance is the finding that participation in collective activities can lead to improved quality of life via receipt of spiritual value, and that online health communities can make a small but significant contribution to quality of life for those who are suffering poor health.

Returning to the notion that spiritual value is a reaction to a consumption experience and an end in itself we only partially agree. Our qualitative study finds evidence that some individuals who join online health communities experience a spiritual reaction, based on the sense of camaraderie and shared experience within the community. Thus our qualitative study supports Holbrook's (1999) contention that spiritual value is a reaction to a consumption experience. Our quantitative results, however, indicate that spiritual value need not be an end in itself, identifying support and existential quality of life as important outcomes from spiritual value. Far from being an end in itself, spiritual value can provide consumers with improved quality of life.

6. Limitations and future research directions

Spiritual value and *communitas* require further development and testing in a variety of contexts before they can be considered robust and reliable. As a first attempt to measure spiritual value, Study 2 models the concept as a uni-dimensional construct incorporating items relating to five dimensions of spirituality: meaning, connectedness, transcendence, enlightenment and emotion. Scale items should be further validated with

consumers and leaders of common religious and cultural groups to describe concepts with greater precision and reduce any bias towards one specific interpretation of terms. Prior studies measuring *communitas* include only items relating to shared state (McGinnis, et al., 2008) and items measuring liminality and the presence of norms and rituals require further development and validation.

The quality of life measures, based on the McGill QOL scale, recognize four dimensions of HR-QOL: physical, psychological, support and existential. Our study considers only two dimensions that are theoretically related to *communitas* and spiritual value: support and existential QOL. Further research is required to identify whether other dimensions of HR-QOL are also related to *communitas* and spiritual value, or to the individual dimensions of *communitas*.

Strong links between spirituality and QOL within the health literature indicate that our study context is a likely consumption context in which consumers may experience *communitas* and receive spiritual value. Future research should investigate the characteristics of other consumption experiences characterized by *communitas* to identify which of those also deliver spiritual value and are therefore likely to contribute to QOL.

7. Conclusion

The combination of qualitative and quantitative analyses within our two studies is an initial but important step in identifying *communitas*, spiritual value and the health and quality of life benefits consumers experience from

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their involvement in online health communities. These two studies make a theoretical contribution by clarifying and operationalising the concepts of spiritual value and *communitas*, drawing upon prior scholarship in the fields of marketing, psychology, religion, health and anthropology. Measures of spiritual value and *communitas* are developed and point to the potential for spiritual value to contribute to quality of life. With further development, spiritual value and *communitas* scales should prove important tools for identifying and measuring value perceived by consumers during collective consumption experiences.

As a managerial and practical contribution, these two studies draw attention to important benefits of collective online experience, especially for those who are sick or disabled and potentially marginalized from society. A further contribution of this study is the practical demonstration of a consumption activity through which those in poor health might achieve spiritual value and improved quality of life. This study makes an important contribution to both the health and marketing literatures, demonstrating that collective consumption experiences characterized by *communitas* can deliver spiritual value leading to improved quality of life.

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Notes

ⁱ http://www.humanscience.wikia.com/wiki/spiritual_values (accessed August 20 2014)

<http://www.spiritualvalues.net/list-of-values.html> (accessed August 19 2014)

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<http://www.merriam-webster.com/dictionary/enlightenment> (accessed August 20, 2014)

CONCLUSION TO PAPER 4

The final paper within this thesis, Paper 4, focuses on spiritual value, and the potential for value co-created between consumers within online health communities to enhance quality of life. Results suggest that, as collective consumption experiences, online health communities can generate *communitas*, leading to spiritual value, which contributes to the support and existential dimensions of quality of life.

This final study identifies perhaps the most important contribution participating in an online community makes to those in poor health. While access to information and supportive fellow-sufferers are important, the co-creation of spiritual value between participants, contributing to quality of life, is a profound benefit, not previously recognised.

Chapter 6. THESIS CONCLUSION

Over the past 10-15 years a substantial body of scholarship has explored the idea that firms are facilitators of value co-created and experienced by consumers as a consequence of consumption (Grönroos, 2011; Prahalad & Ramaswamy, 2002; Vargo & Lusch, 2004). Very little of this work considers value captured within consumer-to-consumer social systems operating beyond the boundaries of the firm. This thesis considers online health communities, seen by some authors as parallel service systems operating on the margins of traditional health systems (Laing, Keeling, & Newholm, 2011), as peer-to-peer service systems in which value is created and exchanged between consumers.

The papers in this thesis shed light on *how* participants co-create value with each other within online health communities, and what benefits they gain from doing so. Paper 1 reviews literature pertaining to value co-creation, including McColl-Kennedy et al.'s study (2012) study that addresses value co-creation within a health context. Papers 2 and 3 then focus on the process of value co-creation. Paper 2 explores social capital as a benefit derived from collective consumption that provides consumers with value specifically related to belonging to a cooperative, collaborative social network. Paper 2 reveals fourteen consumer practices that create social capital and deliver consumer value. Paper 3 probes more deeply into the mechanics of how value is co-created within consumer networks, revealing patterns of value creation at the whole-of-network level as well as within subgroups and dyads and key roles in

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the value-creation process. Paper 4 explores the potential for one specific type of consumer-generated value, spiritual value, to contribute to quality of life. This final paper identifies a higher purpose for online health communities, beyond information and fellowship, revealing the potential for participants who experience *communitas* within online communities to enjoy increased quality of life.

Set within the context of online health communities the three empirical papers confirm the role of such communities as important spaces for the exchange of health-related information and support. Of greater significance though, these papers identify important value-creating social benefits for consumers such as social capital (Paper 2) and stewardship (Paper 3), and personal benefits such as improved quality of life through spiritual value (Paper 4).

6.1 Theoretical contributions

The thesis makes a number of theoretical contributions to the value co-creation literature. Firstly, all four papers shed new light on the co-creation of value between consumers engaged in collective consumption experiences that have no direct involvement with service provider firms. Paper 1 identifies the need for value co-creation scholarship to address value created between consumers within consumer collectives. Paper 2 demonstrates a connection between the creation and maintenance of social capital and value co-creation, highlighting value experienced by consumers as they build and maintain social

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capital within a collective consumption experience. Paper 2 also identifies two general themes that describe the practices undertaken by participants when building social capital, introducing a new line of research into social capital practices within other collective consumption contexts. Furthermore, Paper 2 expands upon and operationalises an existing framework for identifying social capital within online communities (Stewart Loane & D'Alessandro, 2013). Paper 3 confirms a recent proposal that value is co-created in different ways at different levels within a consumer collective context (Chandler & Vargo, 2011) and identifies a stewardship role that facilitates value co-creation between consumers. Finally, Paper 4 develops and defines the concepts of spiritual value and *communitas* and develops scales for measuring both concepts.

6.2 Contributions to the health literature

The empirical papers also contribute to the health literature, in particular literature associated with the concept of self-care in which consumers actively participate in their own healthcare regimes (Rahtz & Syzykman, 2008; Richardson, 1991). Paper 2 identifies the contribution of online health communities to the construction of a meaningful health-knowledge resource for participants and demonstrates that online health communities can be a source of social capital with associated benefits. Paper 4 identifies the potential for participants in online health communities to experience *communitas* that leads to spiritual value and contributes to quality of life. The thesis draws attention to important benefits of collective online experiences for those who

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are sick or disabled with limited capacity to maintain community connections, thereby identifying the potential for online health communities to provide missing social benefits and enhance quality of life.

6.3 Managerial implications

The four papers identify a number of important managerial implications for organisations contributing to, operating, or intending to establish online health communities relating to their brands or services. Firstly, consumers place value on more than health-related information provided within online health communities. Social and emotional aspects of the online community experience appear to be equally as important as the functional knowledge gained from the community. Paper 2 highlights the importance of creating a caring online environment so that social capital can flourish and consumers can co-create value in the process. A second implication is that some participants value contributing to the well-being of others. Risk-averse online community managers or sponsors who deny participants the opportunity to advise one other on health-related matters, retaining that function for employees of the sponsoring organisation or qualified experts, risk alienating a portion of the intended client base. Finally, sponsors of online health communities should carefully consider their positioning within a crowded market of established consumer-led health communities. While some consumers may value the perceived safety of information provided directly by a sponsoring pharmaceutical company or established health services firm,

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others find ways to validate information provided by unqualified fellow-patients and instead place high value on the social and affective aspects of online community life. Rather than competing directly with existing communities, sponsors should look for opportunities to differentiate themselves from, or partner with, existing consumer-led communities.

For managers providing services to health consumers, the papers within this thesis identify the importance of supportive social systems for patients and the roles patients themselves play within their own social networks. While the contribution of social support to patient well-being has been understood for some time, Papers 2 and 3 help to unpack the mechanics by which supportive relationships are created and maintained, and Paper 4 identifies a direct link between *communitas* within a social network and quality of life. Online communities are but one aspect of patients' support networks, which also comprise family, friends and health professionals. Understanding how an online social network operates within a wider social network and contributes to overall patient well-being, helps managers to better understand the role played by members of an online community.

This thesis takes a positive view of online health communities, exploring value perceived by health consumers as they participate in this collective consumption experience. Anecdotal and empirical evidence indicates that not all consumers see online health communities as a positive experience (Gage & Panagakis, 2011). As the internet becomes increasingly ubiquitous, and

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service providers assume consumers are using the internet as a source of advice and guidance, traditional health services must continue to accommodate consumers who cannot or will not use the internet as a source of medical advice.

6.4 Limitations and future research directions

Each of the empirical papers address limitations of each study and future research directions, but a number of future lines of research are worth revisiting here. Firstly, the qualitative papers within this thesis, and the social network analysis, are based on a single online health community. Further work is required to validate and confirm the findings of this thesis through research set within different types of online communities. These might include communities sponsored by healthcare providers, communities that target specific cultural or age-related groups such as seniors or teenagers, and communities associated with different types of health conditions, including mental health. A second and potentially rich line of research opened up in Paper 4 is the relationship between collective consumption, spiritual value and quality of life. The measurement scales for *communitas* and spiritual value require further development, including input from members of religious and cultural groups, and further testing in both real-life and online collective consumption contexts.

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The introduction to the thesis in Chapter 1 briefly touches upon the notion that online communities represent the early stages of democratised medicine. This thesis is set in the “here and now”, exploring how consumers are co-creating value with each other today, constructing peer-to-peer support services and distributing health-related knowledge and support. Sites such as Patients Like Me (www.patientslikeme.com) are already taking this concept further, using patient-provided diagnostic data to predict patient health outcomes and collaborate with medical researchers.

Collaborations between patients and service providers are likely to develop further in the future with both patients and providers capturing value from their collaborative effort. While it is difficult to determine the shape and scope of peer-to-peer health services in the future, it is likely that future directions will provide a rich source of research settings for all academic disciplines. Sociologists will explore the blurring of boundaries between different types of collectives and the changing dynamics between patients and providers. The term “eco-system” may be more closely aligned with the community or social network of the future as different forms of community member come together: individuals, collectives, corporations and researchers. Economists attempting to apportion and optimise the value captured by each actor involved in collaborative ventures will need to develop models that identify and measure value for each individual actor, including those who capture externalities. Not all value can be readily monetised, and future value models will need to accommodate the networked nature of value co-creation (Vargo & Lusch,

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2015). Marketers and service providers will strive to develop business models that recognise the role of the firm as merely one part of a consumption ecosystem, individually constructed by each consumer, that spans both online and offline realms. As consumers become further embedded within value co-creating collaborations psychologists will investigate consumer motivations and rewards for doing so, and health researchers will strive to understand whether these activities contribute to positive health outcomes at an individual and societal level.

Ethical issues related to the privacy of health data are likely to impact upon future research methods. Health consumers are already demonstrating, through their participation in online communities, that they have few objections to sharing health information online. Many anonymise their data to a degree, and the large numbers of people sharing information within peer-to-peer settings indicate that consumers are willing to share when there is a benefit either to themselves or someone else. The high level of protection placed upon patient health data is likely to be revisited as consumers become further involved in collaborations that require them to share with researchers and each other.

The four papers within this thesis begin to fill a number of gaps within the marketing literature. Prior scholarship set within online communities is primarily focused on brand, commercial and special topic communities (Bone,

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Fombelle, Ray, & Lemon, 2015; Kozinets, 2002; Schau, Muniz, & Arnould, 2009). Health contexts require additional research due to the very personal, private and challenging nature of the experience. The papers in this thesis extend prior online community scholarship into a health context, identifying online health communities as important reference groups, constructed by health consumers, functioning as collaborative, global, support systems and contributing to quality of life.

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Appendix A. Prior Online Community Scholarship

This appendix provides a survey of scholarship exploring online communities. While the individual papers in Chapters 2-5 review literature pertaining to the specific paper, none summarises the scholarship that relates specifically to the field of online community research. This appendix provides an overview of the field including methods used to study online communities and ethical considerations.

Possibly the earliest serious study into online community life is Rheingold's (1993) seminal work focusing on "The Well", one of the oldest online communities in operation. Rheingold's autoethnographic account of his experiences as a participant in "The Well" introduced the idea that a real community can form on the internet between people who have never met and who only communicate by means of text. Following Rheingold's work scholars across almost all disciplines explore online communities from varied perspectives. More than 90 such studies were reviewed in preparation for this thesis, summarised in Appendix B.

A.1 Sociology

Sociologists study the structure and mechanics of online communities to understand how they form, what holds them together and how they relate to "real life" communities. Ethnographic and survey-based studies of online communities address an ongoing debate about whether it is possible to find

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true “community” in an online environment. Critics typically follow one or two lines of argument. The dystopian view argues that people who cannot see and hear and touch each other cannot have a “real” relationship and the internet draws people away from their local communities and into a solitary world (Di Maggio, Hargittai, Neumann, & Robinson, 2001; Wellman, 2001; Wellman & Gulia, 1997) or one where they can connect with socially undesirable elements (Bargh & McKenna, 2004; Tierney, 2006). The utopian argument is enthusiastic about the ability of online communities to provide support, even when local neighbourhood support may be unavailable (Braithwaite, Waldron, & Finn, 1999; Etzioni & Etzioni, 1997) and refers to benefits such as the removal of barriers of time and distance (Wellman, 2001). Wellman and Gulia (1997) point out that even “real” communities have not always been geographically bounded as family and friends are often geographically dispersed and relationships are maintained through letters and telephone calls. Early work by Walther (1995) suggests that social relationships developed online can be every bit as supportive and intimate as relationships developed through physical contact, but that deep online relationships will develop more slowly than those between people who are in physical contact. Studies of some online communities reveal participants disclosing health and lifestyle details within an online community more readily than is typically the case in a local neighbourhood social network, possibly as a consequence of greater online anonymity (de Valck, van Bruggen, & Wierenga, 2009).

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Some studies find that people who participate in online community life contribute more to local neighbourhood community life (Wellman, Haase, Witte, & Hampton, 2001; Wellman & Hampton, 2003) and their internet-based communications add to rather than detract from face-to-face and telephone communication (Wellman, et al., 2001). An early and insightful comparison of “real” communities as against virtual by Etzioni and Etzioni (1997) suggests that “real” or geographically defined communities are better at identifying participants and holding them accountable, and also providing group feedback and reward. Virtual or online communities are safer, can accommodate more members, have stronger recorded memories and allow people to bond across time and geography. In addition they allow people to experiment with identity and gender, and are more accommodating of those with physical disabilities or illness.

Of particular relevance to this thesis is the concept of social capital, a construct from the field of sociology that attempts to explain why an individual might act on behalf of a community or family group with no immediate expectation of positive return for the individual (Coleman, 1988). Social capital is treated in more depth within Papers 1 and 2 and will not be addressed here other than to note that a number of studies from the discipline of sociology demonstrate the presence of social capital within online communities (Bohn, Buchta, Hornik, & Mair, 2014; Ellison, Steinfield, & Lampe, 2007, 2011). Paper 2 within this thesis builds upon that work to explore the relationship between social capital within

online communities and its relationship with the co-creation of consumer value.

A.2 Economics

Economists are interested in online communities as a form of productive cooperation between consumers, with contributions of individuals to online communities sometimes referred to as public goods due to their characteristics of non-rivalry and non-excludability (Kollock, 1997; McLure Wasko, Teigland, & Faraj, 2009). Contribution to the production of a public good is, in many ways, an irrational act as it is more rational for an individual to free-ride on the resources produced by others. Free-riding results in a paradox where if everyone decided to free-ride no resource would be created. The motivation of individuals to contribute to online communities and the creation and conduct of online markets has long been the subject of scholarly work in economics (Kollock, 1997; Kollock & Smith, 1996; Tapscott & Williams, 2006).

A.3 Business and marketing

Business interest in online communities began to develop in the mid-1990's with marketers in particular recognising the potential for online community members to inform one another about products and services and influence purchasing decisions (Ballantine & Martin, 2005). Prior to this period, organisations using the internet for business purposes created static information pages rather like print advertisements and placed them online.

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These were sometimes accompanied by online catalogues and e-commerce retailing capabilities. In parallel with searching for information using these static webpages, consumers searched for opinions and reviews about products and services, often locating communities based around particular brands, products or interest areas. Scholars now recognise that information about products and services shared between consumers within these online communities occurs within a social context (Hartmann, Wiertz, & Arnould, 2015). An individual looking for consumption-related information from other consumers within an online community will not only develop consumption-based knowledge but will also learn about the culture, norms and shared language of the community (Kozinets, 1999). Furthermore, consumers who access product information by way of other consumers within an online community context develop greater interest and enhanced knowledge of the product than those who access information directly from corporate websites (Bickart & Schindler, 2001). Jack Barrette, former Category Development Officer for Yahoo!, goes further and claims that consumers trust other consumers more than they trust information supplied by corporations or regulators, suggesting that online communities are built upon that trust (Barrette, 2006). Barrette's claim is a call to arms to marketers to engage in online communities along with consumers in order to understand how consumers learn best about products and services.

Seminal work within marketing identifies online communities as important spaces in which consumers create meaning and collaborate (Kozinets, 2002;

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Kozinets, Hemetsberger, & Schau, 2008; Muniz & Schau, 2005; Schau, Muniz, & Arnould, 2009). More recent marketing scholarship recognises online communities as one component of a consumption experience with the overall experience occurring across multiple consumption platforms. A recent example is a land-sharing scheme operating in both physical and virtual spaces that enables consumers to connect, plan and visualise online then enact their vision in real life (McArthur, 2014). Another is McColl-Kennedy et al.'s (2012) study of patient-constructed healthcare networks incorporating both online and offline health resources. Marketers today recognise that consumers construct their own consumption eco-systems that incorporate commercial, public and social offerings within both online and offline spaces. The online component of these complex eco-systems is but one aspect of an overall consumption experience.

A.4 Psychology and health

Psychologists study the extent to which online communities can fulfil social needs (Barak & Dolev-Cohen, 2006; Leung, 2007; Steinfield, Ellison, & Lampe, 2008) as well as the capacity for online health communities to deliver social support and health information to individuals (Malik & Coulson, 2010; Mo & Coulson, 2008; Tierney, 2006). A recent review of literature (Sandjaja, 2011) suggests three reasons why people, especially those with disabilities who find it difficult to make social connections in “real” life, participate in online community life: 1) the need to belong in communities, 2) the need to feel in control, and 3) the need to be independent. A recent survey of internet users

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(Leung, 2009) examines what motivates users to create content online through blogs, YouTube, Wikipedia and other sites, including contributions to online communities. Along the same lines as the work by Sandjaja (2011), Leung's study finds that users who generate content are gratifying needs in the areas of: recognition (eg. gaining respect and support), cognitive (eg. increasing knowledge), social (eg. sharing feelings) and entertainment (eg. passing time). The gratification of these needs also leads to feelings of psychological empowerment, leading to further contributions and helping the online communities to grow.

A.5 Methods of studying online communities

As with any scientific research, the most appropriate research method for analysing online communities will depend on the purpose of the study, but there are advantages and disadvantages associated with various methods that are unique to the online community environment. As personal relationships are formed within online communities (Rheingold, 1993), research that examines a specific online community is potentially disruptive to the social bonds between community members. An online community is likely to have participants who never meet in a physical sense and may comprise a social network that spans multiple countries, features that create particular ethical and methodological challenges.

The online community studies reviewed for this research program and listed in Appendix B are organised according to the type of research conducted. Just

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over half are quantitative studies, many specifically investigating how participation in an online community or social network contributes to “offline” social and emotional life (for example Ellison, et al., 2007; Kavanaugh, Carroll, Rosson, Zin, & Reese, 2005; Notley, 2009; Steinfield, et al., 2008; Turner, Grube, & Myers, 2001; Wellman & Hampton, 2003). A further seven use public datasets such as the Wisconsin Longitudinal Study (Flynn, Smith, & Freese, 2006) and the 2003 Health and Retirement Study (Hogeboom, McDermott, Perrin, Osman, & Bell-Ellison, 2010), where the datasets are generated from large-scale surveys. One quantitative study uses a dataset generated from Facebook data (Bohn, et al., 2014). The remaining 46 qualitative studies are based on data collected from online communities and interviews.

A popular, primarily qualitative, method of researching online communities is an ethnographic approach, most commonly referred to as “netnography” (Kozinets, 2010) involving content analysis of posts, sometimes supplemented with interviews and participant surveys. Writing from a marketer’s point of view, Kozinets (2002) compares netnography to traditional marketing research techniques of focus groups and personal interviews, finding that “netnography is far less obtrusive, because it is conducted using observations of consumers in a context that is not fabricated by the market researcher” (p. 62). Hine (2000) notes that the participants in an online community use the internet within a social and cultural context at home, work or elsewhere that will not be apparent to the researcher, and this necessarily limits the ethnography. Hine’s preference is to include both physical and online research

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data within what she refers to as “virtual ethnography,” following linkages and flows between participants in both online and physical settings (Hine, 2004). In some circumstances the researcher should consider a degree of physical immersion into the online community if this can be achieved, as it is not always possible to understand the online experience unless the participants can be seen physically interacting with the online community (Mackay, 2005).

The empirical papers within this thesis all utilise netnography to explore and interpret participant behaviour within an online health community. Total immersion in this case is not possible as the chosen site is an online community for people with Inflammatory Bowel Disease (IBD) and the research candidate, who does not have IBD, cannot fully appreciate the meaning and significance of the community to its participants. Observation of online behaviour supplemented with online interviews with participants enabled the researcher to ask questions about her interpretation of observed behaviour and test some of her ideas. The researcher also found herself responding in a personal way to the overall community atmosphere, feeling respect for certain community members, empathy for those who were in pain and gratitude for those who gave so freely of their time to assist others. These responses indicate at least a partial immersion in the community, considered necessary for netnography (Kozinets, 2014).

This thesis is a mixed methods study, using both qualitative and quantitative techniques to explore the consumer experience of online health communities.

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Data analysed in Papers 2 and 3, qualitative data analysed in Paper 4 and Appendices C, D and E draw from a specific online community. Three types of data are analysed: posts and threads collected over a three-month period, transcripts from online interviews with ten volunteer participants and survey data from a pilot survey posted to the online community. The survey generated only 88 useable responses and results are not included in any of the papers presented for examination but are included in Appendix D. In addition to qualitative data from the online community study, Paper 4 includes results from a panel study using survey data collected from participants across a large number of online health communities. The specific studies and methods used are described in more detail in Chapter 1 of the thesis (Section) as well as within the introduction to each paper.

A.6 Ethical considerations

The appropriate ethical approach to conducting online community research is a subject of some debate and as yet there is no clear agreement. One of the factors contributing to the debate is consideration of whether an online community is a public or private space, with implications as to whether informed consent is required from participants.

In a study of an online community of patients with Irritable Bowel Syndrome, Coulson (2005) argues that informed consent should only be required if an online community is considered “private”. A “public” online community is one that requires no special registration for the researcher to view posts, and the

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participant membership is large enough that none of the participants are likely to feel part of an intimate or exclusive group. Contacting all members of an online community for permission to collect data is usually impractical as the membership may number in the thousands, and many participants included in the membership count are likely to be inactive members. Instead the researcher may elect to contact the administrator or moderator of the community for permission to collect data (Laing, Keeling, & Newholm, 2011). Alternatively the researcher can post a message letting the community know that data collection is taking place and offering community members an opportunity to voice their objections (McArthur, 2014). The terms and conditions of the online community sometimes provide guidance to researchers as to the appropriate procedures for initiating a research project.

If the research design involves interviewing participants or administration of questionnaires or surveys then the researcher has no choice but to reveal that research is taking place. Such a revelation may result in a negative reaction from participants who see their online discussion as “private” even though they are aware they are using an online public space (Maclaran & Catterall, 2002). In situations where the data collection is passive the researcher has the option to make no contact at all. In this case the researcher should respect the privacy of the online community members and not reveal the name of the online community in any publications, nor should any of the posts collected be directly quoted (The British Psychological Society, 2007).

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Rules, frameworks and guidelines for the conduct of ethical online community research are proposed by Bruckman (2006), The Association of Internet Researchers (2002) and the British Psychological Society (2007) among others. After careful consideration of relevant literature and direct email consultation with academics working in the field, this thesis adopts the approach of Kozinets (2010, Chapter 8), using “medium cloaking procedures.” The online community analysed in Papers 2, 3 and 4 and Appendices C, D and E is named, but individual pseudonyms and verbatim quotes are “cloaked” through careful paraphrasing. This approach was negotiated directly with the online community administrator and then presented to and approved by the university ethics committee.

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Appendix B. Summary of online community studies reviewed

Survey/questionnaire

Authors	Community studied	Key focus	Academic Discipline
Bagozzi & Dholakia, 2001	Variety of online chatrooms	Self-reported motivation for participation and behaviour within the community, finding that people participate for group reasons, not individual reasons.	Marketing
Ballantine & Stephenson (2011)	Weight loss community	Categorising participants based on the way they use the site and their communication style	Marketing
Beaudoin & Tao (2007)	Yahoo! cancer support groups	Online support groups predict social interaction, which predicts social support and interpersonal trust. Social support predicts improved health outcomes.	Psychology
Best & Krueger (2006)	Variety of online communities including email groups, multiplayer games, forums and others	Relationship between time spent online with others and social capital	Social Science
Blanchard (2008)	Variety of online communities based around topic areas	Sense of community within online groups	Social Science
Blanchard & Horan (1998)	What type of online community would be of interest?	Survey about what type of community would attract an offline person to use an online community	Sociology
Coulson & Knif (2007)	Food Allergy	Motivation for participating in an online support group	Health
Daugherty, Lee, Gangadharbatla, Kim & Outhavong (2005)	Online panel participants	Motivations for participating in online market research panels.	Communication/IT
Daugherty, Eastin & Bright (2008)	Online panel participants	Why people create content - creating content helps consumers minimise self-doubt and feel a sense of community.	Marketing

Survey /questionnaire (cont.)

Authors	Community studied	Key focus	Academic Discipline
Dholakia, Blazevic, Wiertz & Algesheimer (2009)	Ebay user community	Benefits from assisting others and the role of learning from others	Marketing
Ellison, et al. (2007)	University students who use Facebook	Relationship between Facebook use and offline social capital	Communication/IT
Farnham, et al. (2002)	HutchWorld cancer community	Impact of HutchWorld on self-reported satisfaction and social support	Communication/IT
Hartmann, et al. (2015)	Gardening community, mixed methods	Focuses on consumptive moments rather than production of content.	Marketing
Hemig-Thurau, Gwinner, Walsh & Grenier (2004)	Various	Motivation for consumers to provide content on "opinion platforms"	Marketing
Josefsson (2005)	A variety of online health communities	Used mixed methods including surveys and interviews to build a picture of how and why participants use online health communities	Communication/IT
Kavanaugh & Patterson (2001)	Blacksburg Electronic Village	Relationship between online participation and offline civic engagement	Sociology
Kavanaugh, et al. (2005)	Blacksburg Electronic Village	Relationship between online participation and offline civic engagement	Communication/IT
Leung (2007)	Children who use the internet for social purposes	Children interviewed via telephone about how the internet helped them with different social needs	Psychology
Leung (2009)	People who generate content on the internet	Psychological benefits of generating content on the internet	Communication/IT
Li, Daugherty & Biocea (2003)	Students as consumers of products offered through online channels	Effect of online product channel, in particular 3-D representation of the product, on purchase intentions.	Marketing
Lindsay, Smith, Bellaby & Baker (2009)	Heart Disease Community established by researchers	Effect of community accessibility on health-related behaviours compared with control group. Also effect of moderated versus un-moderated community participation.	Health
Mathwick, et al. (2008)	P3 Community for IT technical support	Social capital within online community	Marketing

Survey /questionnaire (cont.)

Authors	Community studied	Key focus	Academic Discipline
McLure Wasko & Faraj (2000)	USENET groups for IT technical support	Motivation to contribute. Mixed methods included survey and also content analysis (ethnography)	Communication/IT
McLure Wasko & Faraj (2005)	Online Legal Community	Motivations for sharing with other legal practitioners, social capital presence	Communication/IT
McLure Wasko, et al. (2009)	Online Legal community,	Mixed method using social network analysis, content analysis. Looking for relationship between social capital and knowledge contribution.	Communication/IT
Netleton, Burrows & O'Malley (2005)	Internet users amongst groups of parents with sick children	How people use internet for health	Sociology
Nolley (2009)	Disadvantaged urban youth who use internet social sites	Mixed methods including survey and interviews examining the contribution of internet social sites to social inclusion.	Communication/IT
Paracharissi & Rubin (2000)	University students who use the internet for social purposes	Relationship between internet social use and satisfaction with offline social life	Communication/IT
Powell & Clarke (2006)	Health patients from Oxfordshire, UK	The role of the internet in mental health information-seeking	Health
Rai-Chaudhuri & Hogan (2004)	Rare form of cancer. Predominately Asian participants.	Online community influence on treatment decisions	Health
Rayner-Goldie & Walker (2008)	Youth civic action websites.	Investigates how young people are using online civic engagement community websites.	Communication/IT
Steinfeld, et al. (2008)	University students who use Facebook	Relationship between Facebook use, social capital and self-esteem	Psychology
Subrahmanyam, Reich, Waechter & Espinoza (2008)	Young adults who use social network sites and instant messaging	Relationship between use of social network sites and instant messaging and offline social networks	Psychology
J.W. Turner, et al. (2001)	Listserve communities for cancer support	Survey comparing FTF support from Partner to support from forum	Communication/IT
Utz (2009)	Hyves, a Dutch social networking site	Online survey to understand use of SNS and relation to political activism. Includes reactions to a fictitious candidate profile.	Communication/IT
Valenzuela, Park & Kee (2009)	University students who use Facebook	Relationship between Facebook use and offline indicators of social capital	Communication/IT

Survey /questionnaire (cont.)

Authors	Community studied	Key focus	Academic Discipline
Wellman & Hampton (2003)	Netville	Relationship between internet access and civic engagement	Sociology
Wright (2000)	SeniorNet	How older people use an online seniors community and relationship to stress	Communication/IT
Wu & Sueoko (2010)	iPhone community in Thailand	Factors that influence knowledge sharing within the online community	Communication/IT

Dataset analysis

Authors	Dataset used	Key focus	Academic Discipline
Atkinson, et al. (2009)	National Cancer Institute Health Information National Trends survey 2005	How do people use internet for health. ?	Health
Bohn, et al. (2014)	Bespoke social network data extracted from Facebook	Measurement of social capital within the online social network	Multi
Cotton & Gupta (2004)	General Social survey, 2000, USA	Who uses online and offline health information?	Social Science
Bone, et al. (2015)	Bespoke dataset constructed from clickstream data	Capacity for peer-to-peer support to replace Firm-provided support	Marketing
Flynn, et al. (2006)	Wisconsin Longitudinal Graduate Study, 2004	How older adults use internet for health	Health
Hogeboom, et al. (2010)	Health and Retirement Study, 2004, USA	How does internet use in older adults correlate with social life and civic participation	Health
Lewis, Kaufman, Gonzalez, Wimmer & Christakis (2008)	Facebook dataset downloaded for this research project, 2006	Demographic characteristics of facebook users	Sociology
Owen, et al. (2010))	California Health Interview Survey, 2001	Who uses online support groups for health?	Communication/IT
Pasek, More & Romer (2009)	National Ammerberg Survey of Youth,	Comparative success of Facebook and Myspace in building social capital	Communication/IT

Content analysis

Authors	Community studied	Key focus	Academic Discipline
Ahuja & Galvin (2003)	Artificial Intelligence Development group comprising academics and corporates	Variable behaviour and content based on participants' length of involvement with the group	Management
Alon & Brunel (2006)	Parenting support forum for new and expecting parents	Rhetorical methods of communication utilised during WOM	Marketing
Barak & Dolev-Cohen (2006)	Support forum for distressed adolescents	Relationship between level of active involvement of the individual and their distress levels	Psychology
Bickart & Schindler (2001)	Variety of forums about different interest areas	Consumer interest in the product topic based on information from online communities as compared to corporate webpages	Marketing
Bone, et al. (2015)	Peer-to-peer computer support	Capacity for peer-to-peer support to replace firm-provided support	Marketing
Braithwaite, et al. (1999)	Disability online forums	Types of social support exchanged	Communication/IT
Chen & Xie (2008)	Amazon.com consumer reviews (of digital cameras)	Comparison of consumer review data to expert published reviews	Management
Coulson (2005)	Irritable Bowel Syndrome support forum	Types of social support exchanged	Psychology
Coulson, Buchanan & Aubeeluck (2007)	Huntingdon's Disease support forum	Types of social support exchanged	Health
Drentea & Moren-Cross (2005)	Mothering support forum	Identification of social capital. Identification of social support.	Sociology
Eichhorn (2008)	Online Eating Disorders	Types of social support exchanged	Communication/IT
Feenberg, Licht, Kane, Moran & Smith (1996)	ALS Digest, an online newsletter and bulletin board	Early study exploring participant behaviours	Health
Finn (1996)	Disability support forum	Types of social support exchanged and general behaviour of participants	Sociology
Fullmer & Walls (1994)	Five disability support forums on FIDONET	Compared content and participant behaviour across different disability types	Health
Hartzler & Pratt (2011)	Three breast cancer communities	Compared patient-generated content on message boards and in autobiographies with clinician information	Health

Content analysis (cont.)

Authors	Community studied	Key focus	Academic Discipline
Jayanti & Sing (2010)	Thyroid Support Board	Considers participant behaviour in the context of Pragmatic Learning Theory	Marketing
Kozinets (2001)	Star Trek fan club	Online and offline consumption spaces and construction of meaning for Star Trek fans	Marketing
Kozinets (2002)	Coffee drinker discussion forum	Marketing implications of a coffee consumption forum	Marketing
Lasker, Sogolow & Sharim (2005)	Primary Biliary Cirrhosis Mailing List	Study of participant behaviour with particular focus on what types of message are exchanged.	Health
Liberman, Wirzlenberg, Golant & Di Mino (2005)	Parkinson's Disease support forum established by research team.	Focus on quality of life through survey and content analysis.	Health
Ling et al. (2005)	Consumer movie review forum	Researchers conducted experiments looking for ways to generate consumer activity on the forum.	Communication/IT
Malik & Coulson (2008)	Male Infertility support forum	Understanding male experience of infertility as revealed through content of posts.	Psychology
Maloney-Krichmar & Preece (2005)	Keyboard – online support forum for people with knee problems	Understanding participant behaviour including consideration of group roles	Sociology
McArthur (2014)	Land-share community of bloggers and respondents	Understanding consumer resource-sharing motivations and benefits	Marketing
Misra, Mukherjee & Peterson (2008)	Depression support forum	Consumer value creation within a health forum	Marketing
Mo & Coulson (2008)	HIV/AIDS support forum	Types of social support exchanged	Psychology
Rier (2007)	HIV/AIDS support forum	Participant behaviour relating to moral dilemmas and how these are expressed and handled within an online community	Sociology
Robinson (2005)	Three forums for discussing 9/11	Comparative study of three forums based in three different countries, with identification of differences in posting patterns and ideological content of posts.	Communication/IT

Content analysis (cont.)

Authors	Community studied	Key focus	Academic Discipline
Seraj (2012)	Airline enthusiasts forum	Factors that create value for online community users	Marketing
Tiemey (2006)	Pro-Anorexia forum	Focus on the concept of pro-anorexia with reference to and examples of content from online support groups for this condition.	Health

Interviews

Authors	Community studied	Key focus	Academic Discipline
Arnold, Gibbs & Wright (2003)	Rifle Range Williamstown	Case study following online community that never really took off.	Communications/IT
Broome (2005)	Medical practitioners	Interviews with medicos about patient use of internet.	Health
Brown, Broderick & Lee (2007)	Buffy Vampire Slayer: mixed methods	Interviews with people (not only on Buffy board) then discourse analysis of Buffy Board. Looked at WOM behaviour.	Marketing
Bushman, Hajli, Lim, Meathernan & Cohen (2014)	Members of health communities	Role of social media in health services	Business
Cova & White (2010)	Warhammer and CouchSurfing	Counter brands and alterbrands – alternatives to traditional service offerings	Marketing
Easterling (2008)	Breast Cancer	Comparison of five breast cancer communities	Marketing
Ewing (2008)	Music lovers	Follows lifecycle of a community commenting on events	Marketing
Gage & Panagakis (2011)	Paediatric cancer	Interviewed parents and found few using information sites; some were using support sites.	Sociology
Gurack (1997)	Social action in cyberspace	Case studies of two social action cases, one a Lotus rollout that went wrong and one a government IT privacy issue.	Sociology
Hardey (2001)	Recruited households that had home pages with accounts of ill health	Questionnaire plus analysis of home pages	Communication/IT
Laing, et al. (2010) and other publications based on the same dataset	Depression, diabetes, prostate cancer and breast cancer. Mixed methods	Content analysis – coding not included in article. Interviews with participants.	Marketing
Landqvist & Teigland (2005)	3 sites: tourism, health and education	Looking for features that result in creation of public good.	Communication/IT
MacLaran & Catterall (2002)	Megastore	Example of how to go about online ethnography	Marketing

Interviews (cont.)

Authors	Community studied	Key focus	Academic Discipline
Patsos (2001)	Rare form of cancer	Case study of Board set up for this form of cancer.	Health
Ridings & Gefen (2004)	Variety of boards, not just health	Asked question about why people got involved. Qual analysis of answers.	Communication/IT
Yu, Taverner & Madden (2011)	Online storytelling for young people	Assessment of benefits from online storytelling.	Health

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Appendix C. Additional published paper

Set within the same online community as that used for Papers 2 and the qualitative sections of Paper 3, ***“Empowered and Knowledgeable Health Consumers: the impact of online support groups on the doctor-patient relationship”*** uses qualitative techniques to explore the online community as a social network, finding that participants learn from one another and then utilise their increased knowledge and capability to influence their health-related relationships beyond the boundaries of the online network. While identifying important benefits for participants such as empowerment and reduced information asymmetry, this paper does not directly address the theme of consumer value and is therefore not presented for examination. Based on theories of social networks and pragmatic learning this paper identifies a new type of health consumer, empowered, knowledgeable and equipped to negotiate health encounters with medical practitioners.

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Empowered and knowledgeable health consumers: The impact of online support groups on the doctor–patient relationship

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ABSTRACT

Increased longevity means that many people live into their 70s, 80s and beyond, with increasing numbers living with chronic disease. The role of the Internet in the care of chronic disease has been explored within the health literature and, to a lesser extent, within the marketing literature, with recent research suggesting that around 60% of patients source internet-based information about medical conditions and treatment. This mixed-methods study explores the impact of online support groups on the doctor–patient relationship finding that participants in an online support group for inflammatory bowel disease share lay advice, empower each other and act as a credible channel for word-of-mouth referrals. The traditional asymmetric relationship between patient and doctor is challenged by this new form of educated, empowered health consumer who is able to work in partnership with medical service providers in the ongoing management of chronic illness.

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CHINESE ABSTRACT

寿命的延长意味着许多人可活到七八十岁甚至更长时间，同时患慢性疾病的人也越来越多。医疗文献显示，互联网已在慢性疾病的护理中得到应用，而且在市场营销文献中也有一定程度的应用。近期研究表明，约60%的患者通过互联网查询疾病和治疗信息。本文采用混合方法，研究网上互助小组对医患关系的影响，研究发现网络上炎性肠道疾病互助小组的成员互相分享个人意见，互相鼓励，将这一小组视为了解医疗诊治信息的可靠渠道。患者与医生之间传统的非对称关系受到这种新渠道的挑战，通过此网络渠道，医疗消费者可获取更全面的信息资讯，与医疗服务提供商合作，持续管理慢性疾病。

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1. Introduction

Modern medicine and improved living standards have increased longevity in developed countries with many people living well into their 70s, 80s and even 90s. With longevity has come an increased burden in chronic disease meaning that large numbers of people are living with disease for substantial periods of their lives, often experiencing physical and psychological challenges, reduced quality of life and social exclusion (Department of Health UK, 2001; Peeters, 2007). With health service models primarily organised around efficient, short interactions intended to resolve health issues rather than manage them, a lacuna has developed between patient

needs and the ability of health services to respond (Laing et al., 2010; Snow et al., 2013).

Traditionally patients have turned to family and friends to supplement health advice provided through formal health channels. The Internet gives patients the ability to turn to websites with medical information and also to one another, with a potential network of thousands of fellow sufferers available for advice and social support that may assist the patient to improve the management of their chronic disease and hence their quality of life. Recent research in the USA finds that more than 60% of people with a health condition turn to the Internet to research their health conditions and 23% of people with chronic disease use the Internet to find others with similar health concerns (Fox, 2011).

As early as 1996 Coiera (1996) predicted that patients with ready access to internet-based information would inevitably become knowledgeable about their own disease and available treatment, with resultant implications for medical practice. The aim of this paper is to assess Coiera's prediction in a modern medical setting, exploring how the use of online support groups (OSG) impacts patients'

Abbreviations: AMA, American Medical Association; CD, Crohn's disease; EN, Enteral nutrition; GI, Gastroenterologist; IBD, Inflammatory bowel disease; OSG, Online support group; QOL, Quality of life; NHS, National Health Service (UK).

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face-to-face health service encounters. This paper presents a mixed-methods case study of an online support group for people with inflammatory bowel disease (IBD), an incurable condition affecting the digestive system. We explore themes previously identified within the health and marketing literature relating to consumer/patient empowerment, the perceived roles of the OSG and medical practitioners and word of mouth marketing implications. Methods used to explore the OSG experience from a consumer point of view include observation, content analysis, interviews and an online survey.

Our study finds that the roles of both health consumers and medical service providers have changed and continue to evolve as a consequence of consumers accessing internet-based health information and other patients. Consumers' use of online peer health networks has a profound impact on behaviours and attitudes towards medical services and important implications for the ongoing care of chronic disease.

2. Literature

A combination of longer life and increasing pressure on medical services requires patients to adopt self-care practices rather than relying solely on medical service providers. Self-care can be thought of as a process where: "lay people function on their own behalf in health promotion, disease prevention and treatment at the level of the primary health resource in the health care system" (Levin, et al., 1979 cited in Richardson, 1991, p. 672). Within the health and medical literature attention has been paid to the concept of self-care for some time with varying views of self-care as being either at odds with professional care or part of a continuum of care whereby self-care practices are incorporated into care routines prescribed by professionals (Dean, 1981).

Marketers have taken an interest in the service and macromarketing implications of self-care. A study by Rahtz and Szykman (2008) finds that consumers actively involved in managing their health experience higher quality of life (QOL) and proposes that self-care can lead to improved QOL for the entire community. Dagger and Sweeney (2007) found that oncology patients are more likely to take an active role in self-care after experiencing multiple health-related service encounters. A more recent study (McColl-Kennedy et al., 2012) explores self-care practices demonstrated by patients in face-to-face healthcare service encounters, finding that patients construct and manage a self-care regime comprising multiple supportive players, and are actively involved in co-creating improved QOL.

A number of self-care practices are facilitated by the ready availability of health information and support on the Internet, although concerns have been expressed about the ability of consumers to differentiate between quality information and quackery (Shaw and Baker, 2004; Weitzman et al., 2011). The rise of the "patient expert" has not gone unnoticed by the medical profession (Hardey, 2001; Hogg et al., 2004) and many government and non-profit organisations utilise patient knowledge in the treatment and support of other patients (Department of Health UK, 2001). Examples include the Multiple Sclerosis Society in the UK delivering disease self-management courses with MS sufferers as tutors, and the Cancer Council of Australia "Cancer Connections" website where cancer sufferers search for others who have a similar disease and age profile (www.cancerconnections.com.au). Patients in the UK who are able to access patient-led education programs for MS, arthritis and manic depression report reduced severity of symptoms, improved control over daily lives and enhanced relationships with their doctors (Department of Health UK, 2001).

Not all results from patient-led education programs are positive. Such programs require considerable logistical and administrative support and some services may be rationed. For less common

diseases these sponsored services may not even be available. A recent study of UK patients who attended diabetes management training found that patients empowered with knowledge about their disease and alternative management strategies experienced negative reactions from less-informed doctors who, unable to cope with informed and empowered patients, blocked access to medication and supplies (Snow et al., 2013). The authors echo earlier calls for doctors and other health professionals to receive education and support in order to effectively treat informed, empowered patients (Im et al., 2008; Paterson, 2001; Thorne et al., 2000).

For convenience, many patients adopt a form of self-care by turning to the Internet for information and to connect with other patients through OSGs (Hogg et al., 2004). With low barriers to entry compared with face-to-face support groups or education sessions, OSGs are a convenient means of accessing other patients for information, advice and support (Braithwaite et al., 1999), providing a level of anonymity that can be important in a healthcare context (Ballantine and Stephenson, 2011).

In the early years of peer-to-peer internet usage some scholars identified the potential for patients to learn about illness and treatment from both online service providers and other patients (Coiera, 1996), with consequential impact on medical service delivery and potential correction of traditional information asymmetry within doctor–patient relationships (Eysenbach and Jadad, 2001). Following those early predictions a number of scholars study online health-related OSGs, identifying them as important spaces for sharing knowledge and learning collaboratively (Drentea and Moren-Cross, 2005; Jayanti and Sing, 2010), receiving tailored information (Liang and Scammon, 2011) and delivering social support (Braithwaite et al., 1999). Other studies explore the mechanics of online health communities, identifying differences between real and virtual communities (Fischer et al., 1996) and categorising participants (Misra et al., 2008), content of posts (Ballantine and Stephenson, 2011; Misra et al., 2008) and types of communities (Nambisan and Nambisan, 2009).

The cited studies, like most studies of OSGs, see the OSG as a form of many-to-many service encounter, separate from the traditional dyadic doctor–patient encounter (Hoffman and Novak, 1996). Few studies consider the relationship between the dyadic encounter and the online peer-to-peer encounter and how these might impact upon one another in a series of many-to-one-to-many encounters. We identified two such studies in which patients were interviewed, but no peer-to-peer interactions between the patients were observed (Hogg et al., 2004; Snow et al., 2013). Other studies rely on observation of peer-to-peer behaviour but with no direct input from OSG participants (Jayanti and Sing, 2010; Liang and Scammon, 2011). McColl-Kennedy et al. (2012) studied patient self-care regimes, some of which include support groups (presumably both face-to-face and online), but the focus of the study is on the entire self-care regime rather than the specific role and impact of the support group. A further study of OSGs (Laing et al., 2011) includes interviews with patients as well as direct observation of peer-to-peer online interaction, but the observation is limited to UK-based OSGs and includes only a small number of online exchanges. Our study includes both extensive observation and direct contact with participants to understand how participation in an OSG impacts on patients' relationships with the wider health system, including the impact on dyadic doctor–patient relationships. We draw upon concepts from pragmatic learning theory (Jayanti and Sing, 2010) to understand how consumers learn collaboratively from each other within an OSG and how the influence of the OSG extends into the dyadic doctor–patient relationships that lie outside the OSG social network. Pragmatic learning theory, developed to explain the collaborative learning processes within OSGs, tells us that participants will acquire knowledge and skills at an individual level through their participation in a group setting and will then apply those skills to

their individual health situations. The authors (Jayanti and Sing, 2010) call for mixed methods studies to extend their theory and also for consideration of the veracity of information posted by participants.

We respond to both of those calls with an exploration of the impact of OSGs on the doctor–patient relationship through a case study that includes observation of peer-to-peer interaction, survey and interviews with participants, exploring the following research questions:

RQ1: What are the online conversation themes that appear to impact upon the doctor–patient relationship?

RQ2: How are doctor–patient relationships expressed within the OSG?

RQ3: How do health consumers decide when to use advice or guidance from other OSG participants, and how does the doctor's advice fit into that decision?

Following Jayanti and Sing (2010), our selection of OSG is based on a desire to observe health consumers who are engaged primarily in the support of one another without intervention from a sponsoring healthcare firm. A recent study of OSGs in a healthcare context identifies four models of OSG, categorised according to whether they focus on the creation or sharing of knowledge, and also upon who leads the group, consumers or healthcare firms (Nambisan and Nambisan, 2009): (1) *Open source model*: led by consumers who innovate or create new services for the benefit of the participants; (2) *Partnership model*: led by healthcare firms that work with consumer groups to innovate or create new services; (3) *Support group model*: led by consumers who share experiential knowledge and address one another's concerns about existing products and services; and (4) *Diffusion model*: led by healthcare firms that facilitate and encourage rapid spread of information and innovations amongst consumer groups.

This current study is set within an OSG built upon the support group model (Nambisan and Nambisan, 2009), led by consumers for the sharing of knowledge and provision of peer-to-peer support in pursuit of self-care of a chronic disease, inflammatory bowel disease (IBD). The case study utilises survey, interview and netnographic techniques (Kozinets, 2010) to explore the changing relationship between health consumers and their medical service providers as a consequence of peer-to-peer online interaction, as expressed by the consumers themselves.

3. Method

3.1. Context

In Australia around 61,000 people live with IBD (the most common forms being Crohn's disease and ulcerative colitis), with this number projected to increase to more than 74,000 by 2020 (Access Economics Pty Ltd). IBD is an incurable group of disorders that cause the intestines to become inflamed, leading to long-term chronic disability. The need for regular and ongoing medical tests and interventions as well as periods of severe symptoms can affect education and employment (www.crohnsandcolitis.org.uk). With no known cause, IBD is typically acquired during early adulthood at a time when people are studying, establishing careers or starting families. The net disease burden of IBD on the Australian economy, taking into account healthcare costs, lost productivity, welfare payments and other costs was estimated in 2005 to be nearly \$2.7 billion per annum (Access Economics Pty Ltd, 2007).

An OSG, www.crohnsforum.com, was selected as a suitable study site due to its large and active international membership of more than 200,000 participants. Membership is free, but participants are required to register with a minimal level of personal information

before posting to the forums. The OSG website contains sub-forums relating to specific aspects of IBD such as support, diet and supplements, book reviews and parents of children with IBD. In addition to standard discussion forums the OSG website includes a platform for rating and reviewing doctors, and a wiki to which participants may add material about drug treatment, surgery, alternative treatments, side effects and other topics of interest to IBD patients.

3.2. Case study

Following Kozinets's (2002, 2010) netnographic method and in line with Yin's (2009) case study approach, the study uses a combination of survey, interview and content analysis of unsolicited threads and posts to explore consumer experience of using an OSG as part of a self-care regime. Permission for the study was obtained from the OSG administrator and owner, who posted a notice to all members letting them know about the study. Posts were coded using Nvivo 10 (QSR International Pty Ltd, 2011) using a grounded approach (Strauss and Corbin, 1990), allowing themes and discussion topics to emerge from the data. The content of each post was coded against multiple themes where applicable. For example a post that discussed surgery and post-surgical limitations on returning to work was coded as both "Surgery" and "Living with Crohn's – Employment." Posts and threads were checked several times by the lead researcher to ensure that all themes were identified and each post was coded against all relevant themes. As new themes were identified posts were re-coded where necessary. For example an early theme identified was that of "Treatment." Posts and threads discussing treatment were coded against that theme until it became apparent that the theme needed to be further broken down into "Medical Treatment," "Surgical Treatment," and "Alternative Treatment." At that point all threads and posts already coded were re-examined and re-coded against the new and more specific themes. Once coding was considered complete, doctoral students coded a subset of posts a second time, with a resulting inter-coder correlation reliability >90%.

In addition, a survey was placed on the most active sub-forum for 3 months, asking a range of questions about the consumer experience of the OSG. To explore patient perception of the role of the OSG within the patients' wider health network a series of questions was posed asking participants who, in their opinion, knows the most about (1) symptoms of IBD, (2) treatment for IBD, (3) surgery relating to IBD, (4) alternative treatments for IBD, (5) personal issues relating to IBD, and (6) living with IBD. Respondents were asked to nominate whether their doctor knows the most, the participants within the OSG or whether both are equally knowledgeable. At the completion of the survey each respondent was asked if he or she would be prepared to participate in an online interview with a researcher. Ten participants volunteered to participate in semi-structured online interviews conducted via email over a period of some weeks. All 10 participants were interviewed. The use of email interviews provided the interviewer with access to a geographically disparate population and the lengthy interview timeframes afforded interviewees time to consider questions and frame responses as compensation for a relatively impoverished interview environment (Kivits, 2005).

4. Findings

4.1. Survey

A post containing the survey link was viewed 2278 times and 93 responses were received, a response rate of 4%. There is no way of confirming that the 2278 views were by unique participants so the response rate may actually be higher. Very few studies that place

surveys on OSG websites report response rates due to the difficulty in identifying population size, so we have no reliable basis for comparison. Of the 93 responses received 1 was a duplicate and 4 were incomplete, resulting in 88 responses for analysis.

The majority of respondents were female (83%) with age distribution skewed towards younger ages (71.6% aged 54 or younger), corresponding with the relatively young onset of the disease. Most respondents were registered members of the OSG (85%) with 13 responses (15%) from non-members (also known as lurkers).

Survey respondents have a clear understanding of the role of doctors versus that of other OSG participants. As shown in Table 1, doctors know the most about surgery while OSG participants are more knowledgeable about symptoms, alternative treatments for IBD, personal issues and living with IBD. Opinions are mixed about whether doctors are more knowledgeable about drug treatments. This result indicates the important role played by “patient experts” in the healthcare regime of OSG participants.

4.2. Themes identified in threads and posts

Full conversation threads were collected for a period of 3 months, resulting in a total of 957 threads containing 16,626 individual interactions between 945 unique userids. Of those interactions 54% were posts and the remaining 46% were one-click responses such as a single click for “thanks” or “sending hugs your way” similar to the single-click “Like” function on Facebook. To our knowledge this is the largest dataset of its kind. With such a large dataset it was deemed impractical to manually code all of the data so a subset of all conversation threads initiated during weeks 3, 4, 7, 8, 11 and 12 of the observation period were coded, resulting in the coding of 477 (49%) threads containing 4198 (47%) posts. The one-click responses were eliminated from this study to provide a focus on the participants’ own words.

4.2.1. Lay knowledge

A theme to emerge from the posts is that of lay advice delivered with confidence and authoritative language. We identified 212 instances of participants delivering lay advice with no obvious foundation of personal experience. Many such posts also include advice to seek help from a doctor, indicating that medical professionals remain an important factor in the overall care of participants, but the posts demonstrate the extent of knowledge (or assumed knowledge) of the participants who spend time learning from other participants and internet sites, then confidently share what they have learned.

During a colonoscopy they push air in so that your bowels are enlarged. This explains why you feel better after passing gas. It's also pretty common to bleed after polyps are removed. If you have inflammation or scar tissue you might find the scope a bit irritating and you could bleed after. Again you should see your doctor, but from what you've described I expect the pain will go away after 2–3 days. (C024, Male, USA, member for 3 years).

4.2.2. Reliability

Senior members of www.crohnsforum.com encourage all information posted to be either cited or identified as personal opinion. Many participants share the results of academic research related to IBD, directly accessing papers from open access journals and other sources. We observed 154 examples of participants urging others to seek advice directly from doctors. Moderators and other volunteer “staff” actively monitor all sub-forums critiquing posts that contain dubious or un-cited information and asking participants to provide source material. Habitual non-compliers are eventually banned.

4.2.3. Liberation

By its nature Crohn's disease (and other forms of IBD) involves difficulties with all parts of the digestive system. In particular, Crohn's disease may cause diarrhoea or constipation, anal fissures and fistulas, intestinal blockages, rectal bleeding and other symptoms not usually discussed other than with a doctor or intimate family member. A network of others who suffer the same or similar problems allows participants to openly discuss their more awkward symptoms with the option of anonymity. Participants indicate that the opportunity to participate in such discussions is liberating.

I really like this forum. I haven't told anyone else in my life any of this stuff but I don't mind typing it out for you guys. (C595, Male, USA, Member for 3.5 years).

4.2.4. Empowerment and activism

Participants demonstrate empowerment in their dealings with medical practitioners and also encourage activism in others.

I drive my doctors mad because I require them to prove to me that there is a reason for every medicine they want me to take. After all these years I know that every medicine they give us causes serious side effects, so there has to be a good reason for me to agree to take something long term. (C236, Female, USA, Member for one year).

If you feel you're getting poor treatment ask your GP to refer you to a different specialist. There are some great NHS doctors out there just as there are some horrible private ones. (C291, Female, UK, Member for 8 months).

Women are over-represented amongst the participants who demonstrate empowerment, and encourage others towards activism. Even after removing posts from one female participant who dominated within this theme, 71% of the remaining posts relating to empowerment and activism were contributed by women compared to 63% of all posts.

4.2.5. Word of mouth

Participants share information about medical service providers, health insurance providers, government services, NGOs, specific drugs as well as affordability programs offered by some pharmaceutical companies and hospitals. Health insurance providers, hospitals and doctors are rarely mentioned by name (unless another

Table 1
Comparison of doctors' and OSG participants' IBD knowledge.

	Who knows the most about ...?					
	Symptoms	Drug treatments	Surgery	Alternative treatments	Personal issues	Living with IBD
Doctors	15 (17%)	42 (48%)	53 (60%)	9 (10%)	2 (2%)	2 (2%)
OSG participants	39 (44%)	11 (13%)	3 (3%)	59 (67%)	70 (80%)	82 (93%)
Same	33 (38%)	34 (39%)	27 (31%)	17 (19%)	13 (15%)	3 (3%)
Did not respond	1 (1%)	1 (1%)	5 (6%)	3 (3%)	3 (3%)	1 (1%)

participant specifically asks) although drugs and pharmaceutical companies are openly discussed.

Haven't your doctors mentioned any specific treatments to you such as Humira, Azathioprine or Methotrexate? These are all drugs that can help you get into remission. (C269, Male, UK, member for 2.5 years).

Participants also share specific recommendations for non-prescription treatments such as soothing creams, diarrhoea-control medications and dietary supplements.

Calmoseptine is great. I buy it at Walgreens but it's often kept behind the pharmacy counter so you'll have to ask for it. (C249, Female, USA, member for 3 years).

Legitimate paid advertising appears on the site to those who are not logged in as members and during our period of observation one organisation requested and received permission from the OSG website owner to market a relevant product within one of the sub-forums. Considerable activity by volunteers in administrative positions, targeted at identifying and removing covert marketing, gives the participants confidence that they are reading genuine referrals from fellow patients.

4.2.6. Opinions about doctors and other medical services

In addition to word of mouth referrals, participants frequently describe both positive and negative experiences in their interactions with medical professionals and medical services. Negative comments outweigh the positive by more than 2 to 1, with males more likely to post negative comments and females to post positive.

I used to have a GI [gastroenterologist] who recommended I try smoking. Seriously. I asked if he meant medical marijuana but he said no that he meant tobacco. It's well established that tobacco has negative effects on Crohn's. I didn't stay long with that doctor. (C921, Male, Germany, Member for 1 month).

I saw a doctor privately some years ago and it cost me quite a lot. The outcome of the visit was that I needed more tests and he immediately told me that he'd refer me for them under the NHS. He never tried to get more money out of me and, not surprisingly, he is still my doctor six years later and he even operated on me last week. (C291, Female, UK, Member for 8 months).

The group that posts most often about their medical service encounters are those who have been members of the OSG for between 6 and 24 months and who are regular contributors. Interestingly "old hands," and those who have taken on administrative roles, rarely post about their doctors.

The OSG website also offers a doctor rating option where participants can name their doctor, write comments and rate the doctor on bedside manner, knowledge, openness to alternative treatments and accessibility. The reviewer may elect to remain anonymous. This function, used primarily by US-based participants, is an interesting feature more typically seen in websites that focus on restaurant, hotel or consumer goods reviews. Only 21 Australian doctors are included in the directory and of these 11 are reviewed, all positively. Three other doctors from the Asia-Pacific region are included, and one Indian doctor has been reviewed, again positively.

4.3. In-depth interviews with participants

Ten participants agreed to be interviewed for this study. The primary purpose of the online interviews was to further explore themes identified within the threads and posts and to provide a deeper understanding of the OSG experience through direct

questioning. One interviewee had recently withdrawn from the OSG as he did not find it useful. Exploration of his reasons for leaving the OSG revealed that he was an elderly gentleman with a long history of poor health and self-reported experience with self-care. While curious to "try out" an OSG, he found it an unnecessary adjunct to the self-care regime he had followed for most of his life and he expressed a preference to obtain medical information directly from his doctors rather than a network of fellow sufferers. He saw no real benefit in the social support aspects of the OSG.

4.3.1. Doctor–patient relationship and the role of the OSG

All interviewees were asked "Do you think that your participation in crohnsforum.com has affected the way you work with your doctors?" Interviewees reveal a range of views about the impact of their OSG participation on their relationship with doctors. C085 (Female, Canada, Member for 2 years) has limited access to specialist doctors with knowledge of crohn's disease and uses the OSG as her primary means of information and medical advice.

I see online how it "should" work with a doctor ... I don't have very much access to doctors. So, I am striving to find and develop the kind of relationship I would like to have, but it is not working out so far ... I think the forum has helped me to prepare for the future when I find a doctor that will work with me to keep me in the best of health at all times, not just see me when I'm extremely ill.

In contrast, C094 (Female, Canada, Member for 1 year) has experienced a number of serious medical issues throughout her life and is comfortable discussing all aspects of her health with doctors. She is satisfied with her medical team and disapproves of the doctor-rating function within the OSG.

I think the proper place to take complaints about doctors is the AMA (in the USA), the College of Physicians and Surgeons (Canada) and/or the gastroenterology associations etc. Especially when complaints are serious things, venting alone isn't going to change how other people act... (but talking to a hospital's patient advocate might).

C205 (Female, USA, Member for 3.5 years and an OSG website administrator) acknowledges the impact of the OSG on doctor–patient relationships.

I think my veteran experience and other "vets" on the forum help others with their appointments and what sort of questions to ask, what tests or medications to suggest or request, what sort of information they should bring and even informs them on when they should go to the emergency room ... I do learn about other treatments and tests on the forum so when I feel it applies to me I do bring it up with my doctor. In the end we're all learning from each other.

Finally, participants express their views of the distinctive roles of doctor and OSG participants.

Mostly I'd say I use the forum info to confirm my docs are on top of things. However if the forum info conflicts I'll always go with what my doc says. (C289, Female, USA, Member for 3.5 years).

4.3.2. The reliability of lay advice

Interviewees demonstrate their ability to assess medical information and advice shared by other participants. Any participant can "report" a post that seems inaccurate or requires the attention of moderators for some other reason. C036 describes the role of the moderators and other volunteer "staff".

I know we work hard to go through the forum and check for spam and for people who are giving out false information. We try to encourage members to give the sources of their information or to say "in my opinion."

C085 (Female, Canada, Member for 2 years) recognises the pseudonyms of regular posters and bases her trust in advice from their track records.

C375, who isn't on a lot, gives really sound medical type info. C232 is a really informed mom whose son was on EN [enteral nutrition] – she will help any parent who is looking for EN info. C278 provides tons of cited medical info ... C317 tells it like it is from her personal experience of the docs not trusting/believing her and she was right every time as to what was going on with her daughter. C205 will step in if things are getting out of hand.

Other participants use a variety of techniques to assess the quality of information they read on the site. C289 (Female, USA, Member for 2.5 years) considers that longer-term participants are likely to post reliable information whereas C278 (Female, UK, Member for 6 months) prefers to consider the number of times that a participant has been “thanked” using the one-click “thanks” function as a reliability measure. C205 (Female, USA, Member for 3.5 years) validates information posted by participants with other trusted websites such as PubMed or Mayo Clinic.

The interviewees, as a convenience sample, are biased in favour of the OSG experience. By way of contrast C445 (Male, Australia, Member for 1 year, left OSG part-way through the study) expresses concern about the authoritative way in which participants provide advice about a complex disease.

Matters are complicated by the diverse nature of physical and psychological symptoms that CD [Crohn's disease] presents. To speak with supposed authority, but lacking knowledge is a dangerous exercise.

4.3.3. Life without the OSG

Interviewees were asked to consider life without the OSG and describe what they would miss the most. All described the loss of community and fellowship. Some indicated that they would miss their role as helper and adviser to others. The value of the OSG is most comprehensively described by C085 (Female, Canada, Member for 2 years).

IBD can make me feel overwhelmed and sad and angry and as though I have no control over my life ... I can go to the forum and read about other people's experience with feeling all of that and what they do to deal with those feelings ... I can research the forum to find out what I can do to help myself and perhaps how to convince a doctor that I am in fact sicker than they realize and they need to do something to help me sooner, rather than later ... I can research reasons for fatigue such as low iron, low B12 and what tests are needed and what supplements are required ... Then I can offer what I know to others, and helping someone else even if you are too sick to leave your own home is a very powerful force. It is self-healing to be able to help others even when you are at your worst ... As well I use the forum to educate the health professionals that I interact with – there are none in my area who specialise in IBD so often I have to tell them how to help me.

5. Discussion

Prior work by McColl-Kennedy et al. (2012) identifies patients as managers of a multi-player health support network, of which an OSG such as www.crohnsforum.com may be one part. This current study focuses in on the role played by the OSG and its impact on the role played by medical professionals. As such we build upon earlier studies of health-related OSGs (Laing et al., 2011; Liang and Scammon, 2011; Snow et al., 2013) with extensive observation of peer-to-peer interaction within the OSG, and direct contact with participants through online interviews and survey.

Returning to the research questions identified in Section 2 we address each of these in turn, drawing from our findings and the literature.

5.1. RQ1: What are the online conversation themes that appear to impact upon the doctor–patient relationship?

Medical information, delivered in an authoritative voice, backed up by research, credible websites or personal experience is freely shared between participants at www.crohnsforum.com. Participants demonstrate an ability to assess the reliability of such information using a variety of methods and are thus engaged in the collaborative education process described within pragmatic learning theory (Jayanti and Sing, 2010) that enables each participant to develop some level of expertise in the nature of their health condition and its treatment. While each participant develops competence and expertise at an individual rate, some will inevitably acquire expertise that rivals that of their medical service providers. The correction of traditional information asymmetry (Eysenbach and Jadad, 2001) can lead to negative service encounters, described in many of the posts that express opinions about doctors and medical services and confirming the recent findings of Snow et al. (2013). For other participants their acquired knowledge enables them to work with their service providers in a partnership, with the “lay expert” bringing expertise to the medical service encounter and contributing to improved health outcomes.

In addition to medical information, participants share techniques for dealing with medical staff and challenging out-dated advice from doctors. With regular entreaties to see a doctor about reported symptoms, the OSG influences when participants choose to engage with a doctor, and for what purpose. In other words the OSG is influential in patient decisions about the timing and nature of medical service encounters. An important characteristic of the more regular or experienced participants is a sense of empowerment and encouragement of others towards activism. Encouraging others to actively manage their disease and question medical service staff is part of the education and learning process characteristic of www.crohnsforum.com.

5.2. RQ2: How are doctor–patient relationships expressed within the OSG?

Participants at www.crohnsforum.com use two methods for expressing doctor–patient relationships; the online doctor rating and posts about service encounters. The online doctor ratings primarily express positive relationships and posts primarily negative. Predominately positive doctor ratings, also identified in other studies (Kadry et al., 2011; Lagu et al., 2010), contrast with the popular view that dissatisfied consumers are more likely to make public comment than those who are satisfied (Chatterjee, 2001). Within a health-care context the predominately positive ratings are most likely a function of the very personal relationship that develops between doctor and patient leading to reluctance to publicly shame the doctor, despite patient anonymity. Such reluctance contrasts with the negative comments observed within the online posts that dominate discussions about doctors and other medical staff but which rarely identify the doctors by name.

Our study provided participants with two additional means of expressing doctor–patient relationships, through a survey and interviews. Both confirmed the ongoing role of the doctor in the treatment of IBD, but point to the doctor as being only one contributor in the overall management of the disease, a demonstration of the orchestrated self-care regime identified by McColl-Kennedy et al. (2012). The doctor's role and scope within a patient's overall self-care regime is an important aspect of self-care that requires further research, discussed further in Section 6.

Both positive and negative reports of medical service encounters contribute to the collaborative learning environment enabling participants to transform the experiences of peers into an personalised approach to managing their own health encounters (Jayanti and Sing, 2010).

5.3. RQ3: How do health consumers decide when to use advice or guidance from other OSG participants, and how does the doctor's advice fit into that decision?

Early concerns by medical service providers that patients would be unable to differentiate between useful and potentially harmful medical advice (Hardey, 1999; Shaw and Baker, 2004) appear unfounded based on observations within www.crohnsforum.com and consistent with other studies of OSGs (Bender et al., 2008). Participants themselves are aware of the potential for misinformation and find ways to satisfy themselves of the veracity of advice such as triangulating with other trusted sources or assessing the track record of the participant posting the information. Participants also indicate through the survey that doctors have the primary role in surgery and recommending and prescribing drug treatments while the OSG is more helpful with the ongoing management of symptoms and how these impact their lives. Interviewees are able to confirm that the roles of doctor and OSG are different, although when advice from the doctor conflicts with that of the OSG the doctor's advice is usually prioritised.

Interviewees are able to name specific pseudonyms they trust, indicating that social bonds, based on trust and reliable information, build between individual participants. In line with the "collective inquiry" described within the theory of pragmatic learning (Jayanti and Sing, 2010), these social bonds encourage participants to become problem solvers for one another, at times by-passing the need for involvement of medical professionals.

In an active OSG such as www.crohnsforum.com, with more than 200,000 registered members, the potential for consumers to be exposed to misleading or conflicting information is very real. Experienced volunteer administrators put in place sub-forums to help organise topics, policies to guide the citing of information and volunteer "staff" to monitor discussions and keep them on track and as accurate as possible without denying participants the opportunity to discuss alternative treatments and theories.

As a case study, www.crohnsforum.com identifies and contributes to the development of a new health consumer, constantly learning from others, teaching others and gaining confidence from that experience. That confidence is carried into service encounters with doctors who find their role reduced to only one of many health advisors to an "expert patient" who is empowered to participate in self-care.

6. Limitations and future directions

A limitation of this study is the pro-OSG bias of participants. As a convenience sample the participants at www.crohnsforum.com are biased in that they are gaining value of some kind from their OSG experience and choose to remain involved. Some research teams establish OSGs specifically for the purposes of research and are thus able to include participants who would not naturally gravitate towards using an OSG (Farnham et al., 2002; Lieberman et al., 2005). As healthcare systems evolve and adapt to the new healthcare consumer it will be important that future research continues to address the needs of consumers who are unlikely to participate in socially-embedded health networks either through choice or lack of access. Additionally this research included one participant who did not find the OSG experience appealing. If peer-to-peer patient networks such as those available through OSGs are to become an important aspect

of self-care in the future it will be necessary to identify what causes some individuals to reject OSGs as a dimension of self-care.

This study explores a successful and active OSG with an international membership. We did not observe medical professionals active within the OSG although some may have been covertly participating. Doctor participation within OSGs has been explored in a limited way within health literature and calls have been made for medical practitioners to become involved in OSGs (Bender et al., 2008). It is unclear at this point whether open involvement of medical professionals in OSGs would enhance or reduce the social experience of the participants. An intriguing line of research for the future would be to explore the potential for medical professionals to play a formal role within OSGs.

A further question raised by this research is how health professionals should position themselves within patient self-care regimes. It is likely that the most supportive position of the doctor will depend on a number of factors such as the confidence of the patient, the availability of alternative sources of advice and support and the nature of the disease and treatments available. With regard to chronic diseases such as IBD, all of these factors may change over a patient's lifetime due to developments in patient confidence, availability of new or improved sources of advice and advances in treatment, requiring the doctor to adopt different roles within a patient's self-care regime at different points in time. In line with similar calls for work in this area (Dagger and Sweeney, 2007; McColl-Kennedy et al., 2012), further work is required to understand more about the factors that influence how best health professionals can support patients engaged in self-care, with development of tools to assist health professionals in positioning themselves in the most appropriate way within the self-care regime of individual patients at different points in time.

7. Conclusion

Health-related OSGs are not many-to-many social networks, separated from the wider health system. Instead they are embedded within a patient's entire health service encounter, providing a channel through which the patient can both receive and deliver health-related information and support. The model demonstrated by participants of www.crohnsforum.com can be described as many-to-one-to-many. In other words, patients obtain information and advice from medical professionals and other consumers and then pass that information on to multiple other consumers through posts to the OSG. In situations where the knowledge of the doctor is inferior to that of the consumers within the patient's wider health network, patients are also passing information back to their own doctors. Thus, doctors, their patients and a wider health network of patients are involved in a circular chain of information and education. This chain breaks down in situations where doctors and other medical service providers are resistant to education from patients, not trusting their patients' sources of information, as identified within posts about negative medical service encounters.

Within the OSG and within medical service encounters patients act as both teacher and student, and the learning process within the OSG includes topics as varied as management of symptoms, management of doctors and other medical staff, living with disease, resolution of personal issues and referrals for products and services. Medical service providers are no longer treating an uninformed patient reliant on the expertise of the doctor for the most appropriate treatment plan. Traditional asymmetry of medical knowledge is undergoing correction as today's health consumer is informed and brings to every service encounter the collective learning and advice of an extended health network of other patients and the doctors of those patients.

Recognition of a new type of health consumer does not address the need for healthcare professionals to see themselves in a new

way. Studies show that healthcare professionals still position themselves as experts, allowing patients and their families only a limited range of choice within a predefined set of options and disregarding the patients' own expertise (Paterson, 2001; Thorne et al., 2000). Doctors can be dismissive of patients' reported symptoms, ignoring the patients' lived experience of their health conditions (Im et al., 2008). As health systems adapt to people living longer with increasing levels of chronic illness attention must be paid not only to the empowered, educated and involved health consumer, but also to the way healthcare professionals, who remain a central part of any health system, interact with their patients.

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Appendix D. Paper presented at ANZMAC 2013

Value in an Online Health Community: It's more than health information

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Abstract

Online health communities are a self-service source of information and social support, yet are rarely studied as a form of consumption. This study surveys members of an online community for sufferers of Crohn's Disease. Building upon work of sociologists who identify the presence of social capital in online communities, we examine the relationship between social capital and consumer value within the Crohn's Disease online community. Results indicate that consumers co-create value not only in the form of timely, quality health information that can be used to improve quality of life, but also spiritual value in the form of connectedness and hope. It is important that health professionals and sponsors of online health communities understand participants are seeking more than health information from their online community. Consumers also experience value through a shared experience, co-creating value whilst generating social capital.

Keywords: Online communities, co-created value, consumer value, social capital

Track: 13 - Host Specialty Track: Enhancing Customer Experience through Co-creation and Interactivity

1.0 Introduction and Background

Online communities are recognised by marketers as “consumption spaces” where consumers interested in a particular consumption activity or brand socialise, exchange information and express themselves (Bagozzi & Dholakia, 2002; Kozinets, 2002; Peters, Bodkin, & Fitzgerald, 2012). While online communities have some parallels with traditional offline clubs and societies, the availability of geographically dispersed lay experts and professionals in almost every activity imaginable gives rise to the enormous popularity of internet-based communities and social networks operating on a scale that is unachievable in the offline world.

Within the health sphere, a recent study by the Pew Internet and American Life Project reveals that one in five internet users with chronic health conditions seek the company of others with the same or similar health concerns (Fox, 2011). With many competing forms of health-related social network available, we argue that consumers will select an online social network that provides value, and that value is co-created by participants working together. Marketers have long recognised that value is perceived by consumers in different ways (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004; Wagner, 1999) and Holbrook’s Typology of Value (Holbrook, 1999) provides a framework for identifying and analysing different forms of value experienced by consumers.

Our study builds on prior scholarship within the field of sociology that identifies the presence of social capital within online communities (Beaudoin & Tao, 2007; Ellison, et al., 2007; Kobayashi, Ikeda, & Miyata, 2011). Social capital is a resource that builds up within social networks characterised by trust and social norms, and enables collective action between network members. We argue that the generalised exchange of support and information with others within the context of an online community leads to the creation and maintenance of social capital, experienced by participants as co-created consumer value in a variety of forms. Our study takes place within the context of an online community for people suffering from Crohn’s Disease and other forms of Inflammatory Bowel Disease (IBD), and assesses the forms of consumer value experienced by participants as a consequence of social capital. Our focus on social capital as a source of value recognises that the exchange of health information and support within an online community can be seen as a “socially embedded consumption experience” (Mathwick, et al., 2008, p. 833).

2.0 Context

In Australia around 61,000 people live with IBD (the main forms being Crohn’s Disease and Ulcerative Colitis), with this number projected to increase to more than 74,000 by 2020 (Access Economics Pty Ltd). IBD is an incurable group of disorders that cause the intestines to become inflamed, leading to long-term chronic disability. The need for regular and ongoing medical tests and

interventions as well as period of severe symptoms can affect education and employment (www.crohnsandcolitis.org.uk). IBD has no known cause and is typically acquired during early adulthood at a time when people are studying, establishing careers or starting families. The net disease burden of IBD on the Australian economy, taking into account healthcare costs, lost productivity, welfare payments and other costs was estimated in 2005 to be nearly \$2.7billion per annum (Access Economics Pty Ltd).

To assess the value derived from social capital within an online health community we selected www.crohnsforum.com as a suitable study site due to its large and active membership of more than 200,000 participants. The online community contains a number of sub-forums relating to specific aspects of IBD such as Support, Diet and Supplements, Book Reviews and Parents of Children with IBD. The forum not only has standard discussion forums but includes a sub-forum for rating and reviewing doctors, and a wiki to which participants may add material about the IBD in its various forms, drug treatment, surgery, alternative treatments, side effects and other information.

3.0 Method

With permission from the community administrator a survey relating to social capital and value was placed within the most active sub-forum. Survey questions were initially drafted and sent to academics currently publishing in the fields of Social Capital and Co-created Value for comment and suggestions. Feedback from these academics was used to refine the items included in the survey placed on www.crohnsforum.com.

The survey remained on www.crohnsforum.com for 3 months. During that time it was viewed 2278 times and 93 responses were received, a response rate of 4%. It is unknown whether the 2278 views were by different participants, so the response rate may actually be higher. Very few studies that place surveys on online community websites report response rates as it is difficult to identify the population size, so we have no reliable basis for comparison. Of the 93 responses received one was a duplicate and four were incomplete, resulting in 88 responses for analysis.

The majority of respondents were female (83%) with age distribution skewed towards younger ages (71.6% aged 54 or younger), corresponding with the relatively young onset of the disease. Most respondents were registered members of the online forum (85%) with 13 responses (15%) from non-members (also known as lurkers).

To identify the presence of social capital within the online community questions were asked based on prior studies of social capital in online communities (Kobayashi, et al., 2011; Mathwick, et al., 2008; Steinfield, et al., 2008). As data were not normally distributed, responses to these questions

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were subjected to principal components factoring with promax rotation. Three factors (with Eigenvalues exceeding 1) were identified as underlying the survey items, accounting for around 65% of the variance in the survey data. The three factors, shown in Table 1, align well with prior social capital studies (Mathwick, et al., 2008).

Survey items relating to consumer value in online health communities are difficult to source from prior studies. Holbrook's (1999) Typology of Consumer Value is the basis upon which items are developed for this study. Many items were removed during the process of exploratory factor analysis, resulting in a 6-factor model that explains around 89% of the variance in the data. The 6-factor model shown in Table 2 closely follows Holbrook's Typology with three of Holbrook's 8 value types, Ethical Value, Status Value and Esteem Value loading onto a single factor that we have named "Personal Value" as it embodies a sense of status, self-esteem and pride as a contributor.

Table 1 Social Capital Measurement Model Results

Construct and Item Description	Loading	Cronbach's alpha
Trust		.725
Most people you meet through the internet can be trusted	.797	
I have confidence that I can judge whether a person I meet through the internet can be trusted	.750	
I trust members of crohnsforum.com to know things I don't know	.619	
I would base an important decision about my medical treatment on advice I received from crohnsforum.com	.414	
Overall the people who participate in crohnsforum.com can be trusted	.761	
Norm of Generalised Reciprocity	.970	
When members post questions to crohnsforum.com, other members try to help		
Commitment to the Community		.879
The relationship I have with crohnsforum.com is important to me	.808	
I would feel at a loss if crohnsforum .com was no longer available	.917	
The relationship I have with crohnsforum.com is one I intend to maintain	.748	
I would not care if crohnsforum.com was no longer available (reversed)	.896	

Table 2 Consumer Value Measurement Model Results

Construct and Item Description	Loading	Cronbach's alpha
Excellence Value		.913
Participating in crohnsforum.com enables me to manage my disease more effectively	.848	
Participating in crohnsforum.com makes it easier to manage my disease	.926	
Efficiency Value		.929
Compared to the effort I need to put in, participating in crohnsforum.com is beneficial to me	.966	
Compared to the time I need to put in, participating in crohnsforum.com is beneficial to me	.980	
Overall, participating in crohnsforum.com is good value	.761	
Personal Value		.949
I help other members of crohnsforum.com who have never helped me in the past	.808	
I help other members of crohnsforum.com who have may never help me in the future	.917	
I have looked up extra information to help other members of crohnsforum.com.	.748	
I earn respect from others by participating in crohnsforum.com	.896	
I feel like I make a contribution by helping others in crohnsforum.com	.866	
	.929	
Fun Value		.897
I have fun interacting with members of crohnsforum.com	.569	
Participating in crohnsforum.com provides me with enjoyment	.697	
I think crohnsforum.com is entertaining	1.103	
Aesthetic Value		.893
I like the way the crohnsforum.com site looks	.821	
I find the crohnsforum.com site easy to use	.993	
Spiritual Value		.866
Participating in crohnsforum.com makes me feel connected to others	.910	
Participating in crohnsforum.com gives me hope	.753	

4.0 Results

Correlation of the Social Capital items with Value items shows correlation between:

1. Commitment to Community with Efficiency, Excellence, and Spiritual Values
2. Trust with Efficiency, Excellence, Aesthetics, Fun and Spiritual Values

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The norm of generalised reciprocity is not highly correlated with any of the value types. The full correlation table is too large to be included here and only significant correlations are indicated in Table 3.

Table 3 Pearson's Correlation Statistic for Social Capital and Value

Social Capital Item	Efficiency Value	Excellence Value	Play Value	Spiritual Value	Aesthetics Value
<i>Commitment to Community</i>	.391**	.306**		.251*	
<i>Trust</i>	.320**	.367**	.311**	.229*	.350**

(**significant at p=0.01, *significant at p=0.05)

Trust is considered by many to be the key indicator of social capital in any community and is often the only variable tested in social capital surveys (Stone, 2001). As an acknowledgement of the importance of trust to the social capital construct, a frequency table comparing responses to questions about trust both within and outside of crohnsforum.com is provided below.

Table 4 Trust within and outside crohnsforum.com

		<i>Inside Crohnsforum.com</i>		
		High Trust	Low Trust	Total
<i>Outside crohnsforum.com</i>	Most people can be trusted	26 (44.1%)	1 (33.3%)	27(43.5%)
	You can't be too careful	33 (55.9%)	2 (66.6%)	35 (56.5%)
	Total	59 (95%)	3 (5%)	62

The frequency table above and a non-significant chi-square of .134 (df=1) indicate that there is no relationship between trust within and external to crohnsforum.com. The majority of participants, even the 55.9% who have a low tendency to trust, are willing to trust the other participants within crohnsforum.com.

5.0 Discussion

Results above begin to explain why these participants choose to participate in this particular online health community. The participants do not know one another personally and are geographically dispersed (so unlikely to meet one another), yet their commitment to the community and trust in one another provides them with an efficient experience (Efficiency Value) delivering

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excellent information (Excellence Value) and providing hope and a feeling of connection to others (Spiritual Value).

Participants initially approach online health communities looking for information about their disease (Stewart Loane & D'Alessandro, 2013a). High quality, useful responses develop trust and encourage repeat visits, encouraging the development of social capital. Participants who contribute questions and responses then develop feelings of connection to others, expressed through posts to the community such as:

*"I can't believe what a relief it is to hear from others going through similar things. I can never express myself to my real-life friends in this way."
(Participant 0536, Female, UK).*

Holbrook's Typology describes Spiritual Value as involving some kind of mystical entity or "other". It is our view that in an online community the community itself is a kind of "other", a virtual space occupied by unknown "others" who are sharing similar experiences. Within this virtual space participants can experience hope and feel a connectedness with others. This can only happen in an environment characterised by high levels of trust, in which other participants are giving and sharing freely. Sharing information and social support in an environment where generous giving is the norm builds a spirit of *communitas*, recognised in prior scholarship as relating to experiential consumption shared in a group setting (Arnould & Price, 1993).

6.0 Conclusion

There is little doubt that respondents are biased in favour of the value provided within the online community. Switching costs are low and if participants were not receiving value they would move on and spend time elsewhere. This study is an initial response to questions about what *kind* of value is experienced within an online health community.

Our contextual study demonstrates that the value received is not only that of reliable, timely information about IBD. Participants also receive access to stocks of social capital, and a feeling of connectedness to others who are co-creating value as part of a community effort. It is not unheard of for health professionals to warn patients of the dangers of online health communities (Hardey, 2001; Stewart Loane & D'Alessandro, 2013b) with predictions of poor quality information and unsafe advice. Health professionals may provide better guidance by suggesting trustworthy sites with good governance as a potential source of information and support. Organisations that sponsor online communities such as insurance companies, non-profit support agencies and health service companies need to design their sites carefully, understanding that the value gained from such sites is not only in the timely

access to reliable information, but also the social capital that builds between participants and converts to spiritual value through *communitas*.

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Appendix E. Paper1 presented at ANZMAC 2014

Co-creating value through an online health community for Inflammatory Bowel Disease: An application of social network analysis

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Abstract

Online health communities have previously been identified as vehicles for the creation and dissemination of valuable consumer-created health information and support. This study uses social network analytical techniques to identify and profile key players in the co-creation of value within an online health community for people suffering from Inflammatory Bowel Disease. Detailed profiling shows that key players gain value primarily from the contribution of others, playing a stewardship role whereby they encourage and reward the contributions of other community members. Prior research into online health communities identifies roles for patients as both consumers and generators of information and social support. The significance of this research lies in the identification of stewardship as an additional role for health consumers operating within peer-to-peer health networks.

Keywords: Online communities, co-created value, consumer value, social network analysis

Track: 11 – Digital Marketing and Social Media

1.0 Introduction and Background

Fifteen years ago Hardey (1999) recognised the internet as a vehicle for the transformation of health consumers into providers of health knowledge. Internet users are now recognised as avid consumers of online health information. Recent research finds that 61% of Americans look online for health information and 60% of those report that their most recent search has had an impact on health in terms of treatment decisions (60%), changes in approach to health maintenance (56%), asking additional questions of doctors or getting second opinions (53%), changing diet, exercise or stress management attitudes (40%), making decisions about seeking medical treatment (38%) or coping with a chronic condition or managing pain (38%) (Fox & Jones, 2011). Consumers do not limit themselves to information

published on medical service or research websites. Around 25% of adults go beyond medical and research websites to look for information posted by other consumers on blogs or within online communities, creating a market for consumer-produced health information.

This paper considers participation in online health communities as a consumption activity, focusing specifically on the value that consumers co-create with one another within such communities. Prior qualitative work identifies types of value created and experienced by consumers participating in online health communities for people with terminal neurological diseases (Stewart Loane, Webster, & D'Alessandro, 2014). The aim of this paper is to extend those ideas, using Social Network Analysis (SNA) techniques to identify and profile key players involved in the receipt and generation of value within an online community for sufferers of Inflammatory Bowel Disease (IBD). SNA is a structural approach utilising a range of techniques used to analyse the relational patterns amongst actors within social systems and is applied across applications as diverse as neural networks, organisations, social groups, economies and ecologies (Borgatti, Everett, & Johnson, 2013). This study identifies actors as individuals participating in an online health community and the relationship under investigation is the flow of participant-generated consumer value through the network.

The significance of this research lies in the identification of the roles health consumers take on as value-creating agents for others. The internet enables patients to assume simultaneous roles as recipients of health services, deliverers of certain forms of peer-to-peer health service and stewards of the value-creation process.

2.0 Context and method

This study examines an online community for sufferers of Inflammatory Bowel Disease (IBD), a chronic disease of the gastrointestinal tract characterised by pain, anaemia, weight loss and impaired growth and development in children. The disease affects 61,000 Australians with an estimated net disease burden of \$2.7 billion per annum (Access Economics Pty Ltd). Living with IBD can affect education and employment and is challenging, especially for those with severe symptoms (Crohns and Colitis UK, 2004-2012).

The IBD online community selected for this study, www.crohnsforum.com, has a large and active membership of more than 200,000 participants. Permission for the study was obtained from the online community administrator and owner, who posted a notice to all members letting them know about the study. Members were assured of their anonymity and that any quoted posts would be paraphrased in a way that retains the original intent and emotion of the post without being traceable back to the original poster.

Threads and posts were collected from the two most active sub-forums for a period of three months during early 2013, providing a dataset of 16,682 posts within 957 threads posted by 944 unique pseudonyms. Coding a dataset of this size was

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considered impractical. A subset of all data, including all threads initiated during Weeks 3, 4, 7, 8, 11 and 12 of the observation period, were included in the analysis. This reduced dataset includes 6160 posts within 427 threads posted by 558 unique pseudonyms.

Coding of threads and posts

Participants indicated receipt of value from a post in two ways, either through a text-based response containing appreciation or thanks for the initial post, or through a one-click response indicating appreciation (similar to the “like” function in Facebook). Most participants who contributed an appreciative text-based response also included a one-click appreciation response. During the period of observation 270 participants were involved in value exchange by delivering value or indicating receipt of value (or both) using a one-click response.

To explore the network structure of value delivered and received within the community, a 270x270 square relational matrix was constructed, with each cell containing a “score” indicating the number of times a participant used the one-click response to indicate receipt of value from another. By way of example, the number 4 in cell (C36, C24) indicates that participant C24 has received value from C36 four times during the observation period.

Posts and interview transcripts were coded using NVivo 10 (QSR International Pty LTD, 2011). The coding scheme was based on Holbrook’s (1999) typology of consumer value incorporating eight types of consumer value categorised across three dimensions of: self-other oriented, active-reactive and extrinsic-intrinsic value as shown in Table 1. The researcher made an assessment about which of Holbrook’s value types was created based on the subject matter of the thread, the individual posts within the thread and the comments from the participant who had indicated the receipt of value. Posts were coded against more than one value type where appropriate. A subset of threads and posts was coded a second time, with inter-coder reliability of greater than 90%. Elements of a grounded approach (Strauss & Corbin, 1990) were also utilised during coding to allow additional themes and discussion topics to emerge from the data.

Table 1 Holbrook’s Typology of Consumer Value (Holbrook, 1999)

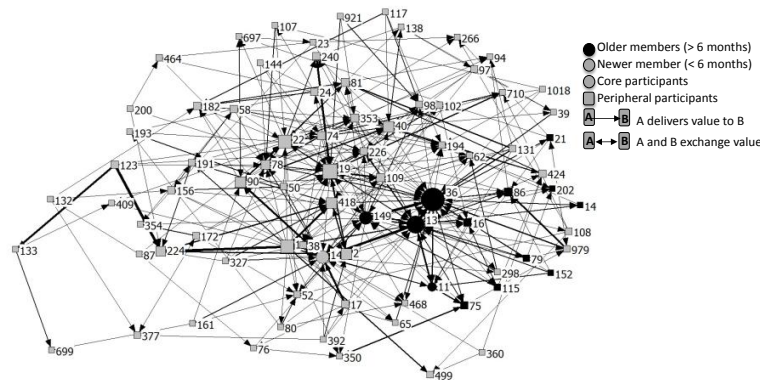
		Extrinsic	Intrinsic
Self-Oriented	Active	Efficiency	Play
	Reactive	Excellence	Aesthetics
Other-Oriented	Active	Status	Ethics
	Reactive	Esteem	Spirituality

3.0 Results

The 270x270 social network relational matrix was loaded into UCINET v6 (Borgatti, Everett, & Freeman, 2002) for analysis. To identify the most active participants in the community, undirected degree centrality (Freeman, 1979) was calculated which represents the total number of times each participant delivered or received value. Total value scores ranged from 1 to 113 with a larger score indicating greater involvement in value exchange. The least active participants, those with a value score of five or less, were removed from the sample as they were considered to be insufficiently involved in value exchange to be of further interest resulting in a simplified 82x82 matrix representing the network of those most actively involved in value exchange. Attributes of each participant were also noted, including: gender, identification as a patient or family/friend, seniority within the online community (ie. regular member, monitor, moderator, administrator), duration of community membership and average frequency of contribution since joining.

The network diagram in Figure 1 provides an overall view of value-flow within the community with the 82 active participants represented as nodes and the relationships between the participants shown as directed lines. An arrow pointing from participant 36 to participant 78 indicates that participant 36 delivered value to participant 78. Larger nodes indicate participants with larger value scores. Thicker lines indicate greater exchange of value between two participants. More experienced participants (those who have been members for more than 6 months) are identified in black, and less experienced participants in grey.

Most online communities are characterised by a core group of participants who contribute most of the content within a larger membership (Kraut & Resnick, 2011). A core-periphery model analysis (Borgatti, et al., 2002) identifies five core participants (participants 11, 13, 36, 142 and 149) representing those most active in delivering and/or receiving value. The core-periphery model is based on a correlational analysis that compares the 82x82 matrix of observed data to an “ideal” matrix in which every core member exchanges value with every other core member, and no peripheral members exchange value with any other peripheral members. In Figure 1 core participants are shown as circles and peripheral participants as squares. Interestingly not all core members are experienced members as participant 142 has been a member for less than 6 months. Also of interest is the active involvement of peripheral members in creating and receiving value from others. While these participants are not as heavily embedded within the network as the core members they still likely gain important information from participation in other groups, either online or face-to-face, and are able to contribute value to others.

Figure 1 Value Exchange between participants

A clique analysis (Borgatti, et al., 2013) provides further structural information identifying important linkages outside the core group. Cliques are subgroups of participants who all exchange value with every other member of the clique. The clique analysis routine requires relations to be binary and mutual which means multiple instances of value exchanged are represented as a single tie, and value flowing in one direction appears as a mutual tie. A clique analysis on the transformed, dichotomised and symmetrised matrix identifies 131 cliques of three or more members. Table 2 shows the ten largest cliques, each containing five members, with considerable overlap between cliques. Cliques 9 and 10 appear somewhat differentiated in membership to cliques 1-8. Note that at least one member of the core (identified in bold) is present in every clique. Of the 18 clique members thirteen are peripheral members of the 82x82 value exchange network.

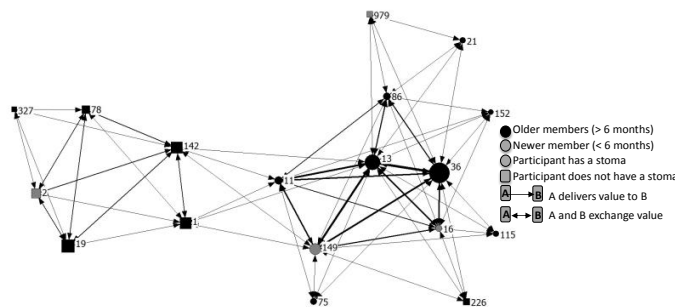
Table 2 Clique members

	Clique Members
Clique 1	Participants 11, 13, 36, 16, 149
Clique 2	Participants 11, 13, 36, 75, 149
Clique 3	Participants 11, 13, 36, 86, 149
Clique 4	Participants 13, 16, 36, 115, 149
Clique 5	Participants 13, 36, 86, 149, 226
Clique 6	Participants 11, 13, 36, 86, 152
Clique 7	Participants 13, 21, 36, 86, 979
Clique 8	Participants 1, 11, 13, 142, 149
Clique 9	Participants 1, 2, 19, 78, 142
Clique 10	Participants 2, 19, 78, 142, 327

A smaller 18-node network diagram (Figure 2) enables visualisation of the value exchange between these participants and indicates two different clique clusterings. Content analysis of posts reveal the participants clustered on the right (members of cliques 1-8, four of whom are members of the core) all have a stoma

(an external bag that collects human waste). Understandably these participants discuss topics of less interest to those who do not have a stoma, solving stoma-related problems and offering suggestions relating to stoma management. One participant in this group does not have a stoma, participant 226. She is also the only clique member who is not a patient but instead is a family member of a patient (who curiously does not have a stoma). Figures 1 and 2 identify that members of the “stoma cliques” do not act in an exclusive way and participate in conversations unrelated to stomas, exchanging value with many non-stoma participants.

Figure 2 Value exchange between members of the ten largest cliques



An explanation for Cliques 9 and 10 is less obvious. Analysis of posts by members of cliques 9 and 10 indicates common involvement in lengthy threads urging activism in the face of poor treatment. In one case participant 2 has been refused treatment in the Emergency Room at her local hospital. Other participants, including members of cliques 9 and 10, empower participant 2 with suggestions about how to protect herself during future ER visits. Another thread is initiated by participant 19, home from work on disability leave but unable to avoid helping his work supervisor who continually calls him for assistance. Members of cliques 9 and 10 provide support and offer advice on how to manage the situation, including linking participant 19 with legal advice from a large corporation with which one of the other clique members has a relationship. Participant 19 indicates that the advice from other participants is of value and that he feels prepared and armed with sufficient information to manage his supervisor’s expectations.

Of interest are the roles played by participants 1, 11, 13, 142 and 149, all members of clique 8, who appear to act as bridges between the stoma cliques and the activism cliques. The ties between the two clique groups are relatively weak but demonstrate the inclusive nature of the cliques. Analysis of the threads in which the members of clique 8 participate identifies mostly threads about Crohn’s Disease symptoms and testimonials about successful treatment. Further analysis of the entire group of 131 cliques, including those with three or four members, is required to understand all the linkage between different clique groupings and the roles of participants in key structural positions. As an example of participants deeply embedded within the social network we profile two members of the core, both members of multiple stoma cliques, to learn more about their involvement in value exchange within the online community.

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Participant 36 (P36)

A female from the USA, P36 has been a member of the online community for more than 2.5 years and posts on average 71.5 times each month. She has been through periods of severe IBD flare and now has a permanent stoma nicknamed “Sideshow Bob.” P36 is most valued for the excellent information she provides in response to the questions of others (excellence value). Other participants indicate receipt of excellence value when P36 writes with authority about drug treatments, surgical procedures and symptoms of all forms of IBD.

I understand that your diagnosis is unclassified, but do you know where it is? The reason I ask is that it is not uncommon for colonic disease to produce a really foul gas when in a flare.

I don't see why your GP can't at least give you some mesalamine or prednisone since that is probably what the gastro specialist will start you on anyway.

P36 herself indicates receipt of value from a wide variety of other participants, including other members of the core and cliques. During the observation period P36 never requests information or support. She most frequently values the contributions of others who respond to those who need information or support. P36 also receives play value from humorous exchanges about symptoms and treatment.

Participant 13 (P13)

P13, an Australian female patient, has been a member of the online community for 8 months and posts on average 46 times a month. During the period of observation she spends time in hospital and continues posting from her hospital bed. P13 is most valued for her efforts to ensure that questions are responded to, and also for the quality the information she provides in response to questions about symptoms and treatment (excellence value), often prefaced with stories about her own experience. Like P36 she asks few questions (only one during the period of observation) but indicates receipt of value from the work of others.

Neither P36 or P1 ask the community for help, yet both indicate frequent receipt of value from exchanges between others. It is highly likely that indications of appreciation provide esteem or status value to those who are participating, encouraging further participation.

Analysis of all coded posts in NVivo reveals that the dominant form of value is excellence value, created through the sharing of information about symptoms and treatment such as that shared by the “stoma cliques”. The second most common form of value is esteem value, created through bolstering and encouraging other participants, examples of which are the threads initiated by members of the “activism cliques”. Esteem value is closely followed by value in the community experience itself, indicated when a participant expresses appreciation that another has responded, even if that response contains no real information or support. This

intrinsic, active form of value is not clearly represented in Holbrook's typology which identifies such value as somewhere between playful fun (self-oriented) and ethics (other-oriented). Those who indicate value in the work of others, such as P36 and P13, are demonstrating a form of stewardship that has not been recognised previously in online communities. Stewardship in this case involves encouraging others to post and indicating approval as a form of reward when others provide information and support.

4.0 Discussion and Conclusion

Online communities of this type are public forums where all posts are visible to all participants. Information and support contributed by one participant is available to all. Social Network Analysis (SNA), commonly used to understand the structure of social networks, is used in this context to explore the flow of value between participants in the online health community, identifying firstly that even new and/or peripheral members of the network can receive value from the community experience and generate value for others. SNA techniques identify two clusters of cliques within the social network, one cluster comprised primarily of individuals who have a stoma and another cluster that appears to be focused around issues of empowerment and activism. Additionally key participants involved in value exchange are identified and profiled to understand how value is created between participants. Significantly, the profiled participants, both members of the core as well as multiple "stoma cliques", indicate receipt of value primarily from the exchange of information and support between other participants. In other words, when A asks for help and B responds, C indicates appreciation for B's response. C's appreciation is a public acknowledgement of B's response to A and is likely to provide additional esteem value to B. In our example neither of the profiled participants holds a formal position within the community (such as monitor or moderator), yet both are clearly important members and it is likely that their endorsement is regarded by the contributor as a form of status value.

This research identifies a new role for patients in addition to the role of providers of health knowledge identified by Hardey (1999). Consumers not only contribute valuable health information and support to one another in online communities, they also act as stewards and champions of the value co-creation process itself.

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Appendix F. Paper2 presented at ANZMAC 2014

The spiritual nature of collective consumption experiences: Defining spiritual value and *communitas*

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Abstract

Spiritual value as a consumer value was identified by Holbrook (1999) around fifteen years ago, yet has not been developed further. Other scholars identify sacred characteristics of consumption experiences, such as *communitas*, without specifically referring to consumer value. Spiritual benefits through consumption may contribute to the overall health and wellbeing of consumers and are therefore important factors in understanding consumption preferences. This paper draws together literature from marketing, psychology, religion, health and anthropology to identify the relationship between *communitas* and sacredness recognised within the consumer culture literature, and spiritual value identified within Holbrook's Typology of Consumer Value. Our work defines the terms *communitas* and spiritual value, extending Holbrook's concept of spiritual value, paving the way for measurement of both concepts within a variety of contexts.

Keywords: Spiritual value, sacredness, communitas, consumer value

Track:2- Consumer behaviour

1.0 Introduction

The current trend of utilising cultural approaches to studying consumption experiences provides marketing scholars with a rich understanding of how consumers value and appreciate those experiences. A number of culturally-oriented studies from the late 1980's and early 1990's identify important

consumption phenomenon such as sacredness, *communitas* and spirituality (Arnould & Price, 1993; Belk, Wallendorf, & Sherry Jr., 1989; Celsi, Rose, & Leigh, 1993; O'Guinn & Belk, 1989; Schouten & McAlexander, 1995). Following these, Holbrook (1999) draws upon the field of axiology to identify spiritual value as one of eight forms of consumer value, later operationalizing spiritual value within two introspective, qualitative studies (Holbrook, 2005, 2006). Apart from Holbrook's own attempts to operationalize the concept no other scholar has attempted to link spiritual value with the concepts of *communitas* and sacredness identified through the earlier cultural studies.

The aim of this paper is to draw together literature from health, religion, anthropology, psychology and marketing to further develop the concept of spiritual value, recognised in Holbrook's Typology of Consumer Value (Holbrook, 1999), but barely considered within the marketing literature since. A spiritual dimension to life is recognised within health and religious literature as important for health and wellbeing (Pargament, 1997; Ross, 1995) and may influence consumption preferences for those who experience spiritual fulfilment through consumption. While the main aim of this paper is to focus on understanding spiritual value, at the same time we explore the concept of "*communitas*" which is used within the marketing literature to characterise collective consumption experiences that have a sacred or spiritual dimension. Is *communitas* a form of spiritual value? Are the terms interchangeable in some contexts?

Our review of literature identifies marketing literature that refers to both sacredness and *communitas* as characteristics of consumption experiences that have a spiritual dimension. Accordingly, after summarising Holbrook's notion of spiritual value, we explore the meanings of both sacredness and *communitas* in order to develop our understanding of spiritual value as an outcome of consumption. The significance of this paper is its contribution to marketing theory, and in particular progress towards measuring and testing for spiritual value as a distinct form of consumer value.

2.0 Spiritual Value

Marketers intuitively understand spiritual value as delivered through specifically religious experiences such as a church service, a bedside blessing by a priest or a ceremony such as a Bar Mitzvah. Marketing scholars also recognise spiritual aspects of non-religious consumption experiences, studying experiences such as a rafting trip, skydiving and club-based motorcycle riding and describing them as sacred times, set apart from normal daily life (Arnould & Price, 1993; Celsi, et al., 1993; Schouten & McAlexander, 1995). These authors discuss how these collective consumption experiences lead to feelings of connectedness, transcendence and meaning.

While these studies find elements of spirituality within particular contexts, none define spiritual value derived through consumption experiences. Holbrook (1999) is one of the few who explicitly examines the different types of value consumers

gain, with spiritual value being one of the eight value types identified. He describes spiritual value (1999, pp. 22-23) as:

“... an intrinsically motivated acceptance, adoption, appreciation, admiration, or adoration of an Other where this “Other” may constitute some Divine power, some Cosmic Force, some Mystical Entity, or even some otherwise inaccessible Inner Being and where such an experience is sought not as a means to an ulterior end but rather as an end in itself prized for its own sake.”

For Holbrook (1999) spiritual value is a “reactive appreciation of a consumption experience prized for the intrinsically motivated sake of how it affects one’s relationship with some relevant ‘other – whether that ‘other’ be a deity, a cosmic force, another person, or some otherwise inaccessible aspect of one’s own inner self” (Holbrook, 2005, p. 58). A crucial component of spiritual value is its reactive nature. Consumers gain spiritual value not through purposive action but through an intuitive response to a consumption experience which may be active experiences in themselves. For example a consumer may actively participate in a church service and benefit from multiple forms of value. It is the consumer’s response to the consumption experience that provides the spiritual value that is reactive in nature. Spiritual value need not involve a relationship with an entity separate from the consumer, such as deity or god, but it must involve a relationship with something greater than one’s own daily self.

Holbrook’s concept of spiritual value is an important first step, but clearly open to further conceptual development. Holbrook claims that spiritual value is an end to itself, and that a search for spiritual value has no benefit other than the fulfilment of that search (Holbrook, 1999). We know consumers who experience spiritual value recognise that something awe-inspiring has happened to them, something that is not entirely under their control, but we do not know what that something involves. We are left wondering what types of consumption experiences lead to spiritual value and whether in fact benefits do follow from the receipt of spiritual value. To answer these questions, we pick up the threads of earlier works in cultural studies that describe the spiritual dimensions of certain consumption experiences.

3.0 Sacredness in consumer behaviour

Pargament, discussing the relationship between religion and spirituality, eloquently claims that spirituality is “a search for the sacred” (Pargament, 1997, p. 39). The idea that times, places and objects are sacred when “set apart” is a theme discussed in some detail by Belk, Wallendorf and Sherry (1989). Focusing primarily on consumption in a contemporary context the authors differentiate between sacredness as a concept related to religion and sacredness of non-religious times, places and objects. Suggested examples of non-religious sacred items include flags, national parks, art, automobiles, museums and collections. Other authors see sacredness in the symbolism attached to photographs or other items that are reminders of happy times or significant events (Boztepe, 2007). Heirlooms are considered to have sacred associations to the deceased and may be kept in a special place within the

home, only brought out during significant rituals such as a family Christmas dinner or wedding (Belk & Wallendorf, 1990). The characteristic of sacredness comes from being set apart from the ordinary and seen as somehow “special.”

A number of authors find sacred meaning in collective consumption experiences. Arnould and Price (1993) describe participants in a river rafting trip as setting themselves apart by entering “the sacred precinct” for the duration of their rafting journey. Similarly O’Guinn and Belk (1989) describe a religious theme park as set apart from the day-to-day world, requiring visitors to drive through an idyllic forest to reach the park, away from the carpark and life on the outside. In addition to the sacred characteristic of such collective experiences, participants often feel a connection to others undertaking the same experience and form an intense but temporary cohesive bond with fellow participants known as “communitas.”

4.0 Communitas

Belk, Wallendorf and Sherry (1989) see communitas as a property of sacredness, one that “frees participants from their normal social roles and statuses and instead engages them in transcending camaraderie of status equality” (p. 7). Communitas is a term only used in relation to collective experiences or events. Turner (1969) coined the term communitas to describe an intense shared state that develops between individuals when they cast aside their normal daily roles and obligations and act within an atypical collective environment. Groups experiencing communitas are often in a liminal state whereby they have left behind their normal daily structure and roles and entered a temporary state of “anti-structure”, an informal structure that exists alongside the formal, legal, social hierarchy and which is more closely associated with social or kinship bonds.

Communitas is described by Turner (1969, p. 128) as “almost always held to be sacred” as it transcends social norms and dissolves societal boundaries, leading to experiences of “unprecedented potency” or creativity. Much of Turner’s work is set within the context of pre-industrial societies in which the sacred involves magic and totemism, with worship and reverence accorded to natural phenomenon (Belk, et al., 1989). Turner’s early work provides few clues as to how the concept of communitas manifests in post-industrial societies other than a brief discussion of the hippie culture and its rejection of social norms and obligations in favour of personal relationships and sexual freedom (V. Turner, 1969, p. 112). In later work Turner (1983) argues that pre-industrial societies usually experience communitas during periods of liminality whereas post-industrial societies are more likely to find communitas during periods of leisure. Periods of both liminality and leisure are argued to be periods of time separated from the normal daily routine and therefore seen as special times that, when contributing to transcendence of the ordinary, can generate communitas (V. Turner, 1983).

Scholars exploring and attempting to develop the concept of communitas identify it in a number of contemporary contexts. Celsi, Rose and Leigh (1993, p. 12) identify as communitas the “sense of shared ritualistic experience that transcends ordinary camaraderie” during a skydiving adventure. Schouten and McAlexander (1995, p.

51) recognize *communitas* in the shared experience of Harley Davidson bikers described almost as a tribal ritual: “the formation moves like a single organism, the sound of a single motorcycle is caught up in a symphony of pipes, and individual identity is subsumed by the group.” A river rafting experience is described as a series of shared performances during which a bond and sense of we-ness develops between participants, with the formal leadership roles of the guides subsumed by the integration of the guides into the overall experience (Arnould & Price, 1993). Other scholars see *communitas* developing in less adrenalin-charged activities such as an academic project team discarding regular social and work-related roles while travelling together collecting data, creating a liminal project-based community before returning to their regular workday structure and roles (Sherry Jr., 1987). Residents in an elderly care facility are considered to experience *communitas* through social closeness that develops between some elderly residents (Spencer, Hersch, Aldridge, Anderson, & Ulbrich, 2001).

Communitas then is a social bond that develops between members of a group who are undergoing a special experience of some kind. The group must be in a state in which dominant social structural roles and obligations are discarded and replaced with status equality or a more informal social structure. Members of the group often undergo some form of ritual in order to enter the liminal state. Drawing from the various interpretations of *communitas* in the literature, we define *communitas* as follows:

Communitas is a shared, liminal state resulting from active, directed engagement in an atypical, stimulating collective experience involving norms and rituals.

Belk Wallendorf and Sherry’s (1989) view of *communitas* as a property of sacredness is at odds with Turner’s (1969) view of *communitas* as *having the* properties of sacredness. Clearly the concepts of sacredness and *communitas* are related, but sacred is a broad term that can be used to describe people, places, objects and times that are set apart and “special,” facilitating transcendence. *Communitas* is a specific instance of the sacred with the properties of collective transcendence carried on at the margin, separated from the normal and likely to involve ritual.

5.0 The spiritual value of consumption

If spirituality is “a search for the sacred” (Pargament, 1997, p. 39) then fulfilment of that search should provide spiritual value. Collective consumption experiences that result in a shared state of *communitas* involve direct engagement in an activity that diverges from normal daily life. The experience is somehow set apart and sacred and may even be spiritual in nature, but not necessarily so. *Communitas* provides the consumer with a means of transcendence, as the consumer enters a liminal state of anti-structure in which the group acts as one, performing activities that may be challenging and impressive, or not, but which are set apart from the everyday. The outcomes of *communitas* can include high levels of energy, creativity and competency (V. Turner, 1969) with lasting memories of the experience and positive feelings towards the other group members.

Whereas *communitas* requires the consumer to be actively involved in the consumption experience, a consumer gains spiritual value through being *acted upon*. Spiritual value comes from consumption experiences that connect consumers with something greater than themselves, a connection that allows consumers to transcend the mundane. Holbrook's (1999) work identifies spirituality as a transcendent form of consumer value, but he sees the outcome from spiritual value as being an end in itself and we are left wondering what benefits consumers receive from their transcendent experience.

Literature from religion and health help us to understand the implications of fulfilling the search for spiritual value, identifying important benefits for the consumer such as meaning (Dickinson, 1975), the ability to cope with adversity (Hay, 1989), hope (Clark, Cross, Deane, & Lowry, 1991), peace (Steinhauser et al., 2006), connection with others (Newsham, 1998) and for those who are suffering ill-health, improved health and quality of life (Dickinson, 1975; Ross, 1995). We therefore build upon Holbrook's concept of spiritual value and propose that spiritual value delivers transcendence in the form of acceptance, comfort, reassurance, peace, hope, enlightenment or fulfilment, depending on the context and the situation of the individual. This may be a humbling experience such as the receipt of donations given by anonymous benefactors during a period of financial hardship or it may be a calming experience such as a blessing from a Priest following diagnosis of an illness. Whatever the context, the consumer is reacting positively to an experience that involves a relationship with some force or "other".

Both *communitas* and spiritual value provide the consumer with a means of transcendence, yet they are not the same as each delivers different outcomes. *Communitas* is transcendent only temporarily. Typically once the group disbands, the energy, creativity and freedom go and only memories remain. Spiritual value can provide a more permanent transcendence as the consumer's relationship with some greater force or omnipotent "other" is strengthened. Such a connection produces feelings of peace, comfort, humility as well as respect and allows one to accept their own insignificance and place in life. Taking this into account we revise the definition of spiritual value to recognise the important and varied outcomes:

Spiritual value is an emotional reaction to a consumption experience that connects consumers with something greater than themselves, providing transcendence, enlightenment and meaning.

6.0 Conclusion

Spiritual Value, identified by Holbrook 15 years ago, is operationalized in only two studies, both authored by Holbrook himself (Holbrook, 2005, 2006). During that same period other marketing scholars take cultural approaches to studying consumption experiences that have a spiritual dimension, identifying sacredness and *communitas* as characteristics of those experiences.

This paper takes a first step towards linking *communitas*, sacredness and spiritual value, three related terms used throughout the marketing literature but within different bodies of marketing scholarship. Drawing from the culturally-oriented marketing literature we propose that *communitas*, while sharing the properties of transcendence and sacredness with spiritual value, is not the same as spiritual value as it is active rather than reactive in nature. We propose definitions of spiritual value and *communitas* that are an initial but necessary step in the development of both concepts and pave the way for empirical testing and measurement of spiritual value within a variety of consumption contexts. Additionally, we extend Holbrook's concept of spiritual value, drawing from the health and religious literature to recognise important benefits associated with spirituality.

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Appendix H. Ethics Approval Letters



12 September 2012

Dear A/Prof Webster

Re: "Value experienced through social capital within online social networks for people with disabilities or chronic illness" (Ethics Ref: 5201200616)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

A/Prof Cynthia Webster
Dr Steven D'Alessandro
Mr Yakupiti Charindra Ruwan Keerthipala
Mrs Sonal Babita Singh
Ms Susan Stewart Loane

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 12 September 2013
Progress Report 2 Due: 12 September 2014
Progress Report 3 Due: 12 September 2015
Progress Report 4 Due: 12 September 2016
Final Report Due: 12 September 2017

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five

Appendix H

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year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely

Dr Karolyn White
Director, Research Ethics
Chair, Human Research Ethics Committee

Appendix H



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14 August 2014

Associate Professor Cynthia Webster
Department of Marketing & Management
Faculty of Business & Economics
MACQUARIE UNIVERSITY NSW 2109

Dear Associate Professor Webster

RE: *Creating value through social capital within online social networks for people with disabilities or chronic illness* (Ref: 5201400741)

Thank you for submitting the above application for ethical and scientific review. Your application was considered by the Macquarie University Human Research Ethics Committee (HREC (Human Sciences and Humanities)) at its meeting on 25 July 2014 at which further information was requested to be reviewed by the Ethics Secretariat.

The requested information was received with correspondence on 8 & 11 August 2014.

I am pleased to advise that ethical and scientific approval has been granted for this project to be conducted at:

- Macquarie University

This research meets the requirements set out in the *National Statement on Ethical Conduct in Human Research* (2007 – Updated March 2014) (the *National Statement*).

Details of this approval are as follows:

Reference No: 5201400741

Approval Date: 25 July 2014

The following documentation has been reviewed and approved by the HREC (Human Sciences and Humanities):

Documents reviewed	Version no.	Date
Macquarie University Ethics Application Form	2.3	July 2013
Correspondence from Ms Susan Stewart Loane responding to the issues raised by the HREC (Human Sciences and Humanities)		Received 8/08/2014 & 11/08/2014
MQ Participant Information and Consent Form (PICF) entitled Questionnaire Ethics & Anonymity	1	11/08/2014
Qualtrics Survey Questions		

Appendix H

This letter constitutes ethical and scientific approval only.

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the *National Statement*, which is available at the following website:

<http://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research>

2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol.

3. All adverse events, including events which might affect the continued ethical and scientific acceptability of the project, must be reported to the HREC within 72 hours.

4. Proposed changes to the protocol must be submitted to the Committee for approval before implementation.

It is the responsibility of the Chief investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the Ethics Secretariat on 9850 4194 or by email ethics.secretariat@mq.edu.au

The HREC (Human Sciences and Humanities) Terms of Reference and Standard Operating Procedures are available from the Research Office website at:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics

The HREC (Human Sciences and Humanities) wishes you every success in your research.

Yours sincerely



Dr Karolyn White

Director, Research Ethics & Integrity,
Chair, Human Research Ethics Committee (Human Sciences and Humanities)

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research* (2007) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.