Practice Diffusion

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Diffusion is traditionally examined at a macro level, measured by adoption (e.g., sales), or at a micro level, assessed by consumer characteristics (e.g., adopter types). We address diffusion at a meso level focusing on how a practice disseminates across extended time and cross-cultural and cross-national space. We conduct an historical analysis and ethnographic inquiry of the dispersion of an indigenous practice, surfing, and the consequences of practice diffusion on practice reproduction. Our data suggest practice diffusion is not the wholesale adoption of a practice. Rather, a practice emerges across diverse cultural and national contexts through adaptation, fueled by processes of codification and transposition. We find that the movement of practice elements (meanings, materials, and competences) and their dynamic linkages (transposition, codification, and adaptation) enable a practice to (re)emerge across broad historic epochs and complex sociocultural landscapes. This study reveals how a practice evolves through shifts in power between practice carriers and noncarriers and results in distinct forms of reproduction (demarcation, imitation, acculturation, and innovation) that can mask the cultural genealogy of a practice. The continual maintenance and evolution of a practice depend on its strength of alignment and embeddedness within systems of practices that make up the social fabric of everyday life.

Keywords: diffusion, practices, emergence, cross-cultural, social change, innovation

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When Jafar bought his surfboard he had no idea that you were even supposed to stand up, he thought you were supposed to ride that thing on your stomach all the way to the beach. It wasn't until he saw it on TV that he realized that you're supposed to stand up...Jafar sent Tom an email that said, "Hey Tom, I need gum for my boat." What he was actually saying was I need some wax for my surfboard...but it just goes to show how bizarre the idea of surfing is over there, that they would call a surfboard a boat and wax gum.

- Kahana Kalama, Professional Surfer, in Brownley's (2009) film *Gum for My Boat*

Jafar purchased his surfboard from an Australian tourist in Bangladesh and surfed alone for seven years riding his board prone (on his belly) before he learned that people around the world rode that same type of board standing. Jafar's story is told in a documentary, *Gum for My Boat*,

which reveals that movement of a foreign artifact into a new sociocultural context can require substantial social change for a practice to take root. This film depicts how surfing emerged in Bangladesh after it was purposefully introduced to the region and consistently supported through the influx of surf-related resources, such as surfboards and wax, by an organization called Surfing the Nations (STN). The passage above indicates that traditional measures of diffusion (sales) may account for the movement of a product (surfboard) but do not explain how meanings and competences associated with a practice (surfing) diffuse. This gap between product (surfboard) possession and practice (surfing) reproduction accentuates the need to understand how a practice diffuses, particularly across diverse, and sometimes contradicting, cross-cultural and cross-national contexts (Shove, Pantzar, and Watson 2012).

Practices are more than actions; they are routinized (Reckwitz 2002) things people do, say, and understand (Schatzki 1996) that exist with other interlocking and adjacent practices. As practices reproduce through human actions and interactions (Giddens 1979), they intersect, converge, and compete with other practices and form systems of practices, or a practice plenum (Schatzki 2019, 27). Entanglements of situated practices that underpin a practice plenum structure a constellation of interrelated social structures, such as religions, laws, markets, businesses, sports, and families, which are woven together as the social fabric of everyday life (De Certeau 1984). Movement of a practice and its carriers can change other systems of practices and new carriers can begin to reproduce practices as well (Schatzki 2019; Shove et al. 2012).

The need to understand *how* practices move is evidenced by growing efforts to explore consumer and market responses to environmental (social, ecological, political, and economic) threats (Campbell et al. 2020) that disrupt daily routines, such as going to work and school (Phipps and Ozanne 2017). The spread of particular practices can potentially improve quality of life, by, for example, alleviating debt (e.g., saving), reducing waste (e.g., composting), and saving lives (e.g., seatbelt or mask-wearing). Conventional diffusion models use macro measures to assess adoption rates (e.g., sales) and micro categories to identify types of adopters (e.g., an individual's risk tolerance; Rogers 2003). However, they fall short in explaining how practices spread, particularly as they are reproduced across diverse sociocultural contexts.

Our investigation focuses on the dissemination of enduring, rather than fleeting, practices. We conceptualize practice diffusion as the *dispersion of a nexus of sayings, doings, and understandings* (Schatzki 1996) within and across distinct sociocultural contexts (Shove et al. 2012). Consumer research reveals the centrality of practices in cultural consumption experiences (Canniford and Shankar 2013; Seregina and Weijo 2017; Woerman and Rokka 2015), rituals (Bonsu and Belk 2003), routines/habits (Epp,

Schau, and Price 2014; Phipps and Ozanne 2017), communities (Schau, Muñiz, and Arnould 2009), and journeys (Akaka and Schau 2019). Practices are complex and dynamic social phenomena (Schatzki 1996), which, when continually reproduced, constitute social structure (Giddens 1984). Warde (2005, 137) conceptualizes consumption as "a process whereby agents engage in appropriation and appreciation" and claims consumption is part of practically every practice. However, prior research also reveals practices can be fragile, particularly when they misalign with dominant social structures (Chandler et al. 2019) and/or other practices (Thomas and Epp 2019).

We explore the underlying process(es) of practice diffusion by conducting an historical analysis and ethnographic inquiry of the dispersion of surfing. Surfing is documented as continuously reproduced for more than 200 years (Dawson 2018; Laderman 2014; Warshaw 2010; Westwick and Neushul 2013), has traveled across numerous countries and hundreds of coastal regions, and is now making its way inland through the use of technology and increasingly realistic artificial waves (Goode 2018). In 2021, Surfing appeared in the Summer Olympic games for the very first time. Although global health concerns paused its original 2020 Olympic debut, the invitation to participate as a sport at this level marks a new milestone and increased legitimization of the practice globally. The cross-national diffusion of surfing is especially intriguing because prior research shows that introduction of a unique practice across diverse cultures is often met with increased resistance; acceptance requires coordination among many parties (Kaufman and Patterson 2005) including noncarriers.

This empirical investigation is guided by three research questions: (1) how does a practice diffuse? (2) what process(es) drive practice diffusion? and (3) what are the consequences of practice diffusion on practice reproduction? To answer these questions, we rely on a practice theoretic approach that highlights the relationship between micro, meso, and macro levels of social phenomena (Schatzki 2019; Shove et al. 2012). We focus our investigation on a practice (rather than a product or an adopter), as our central unit of analysis. We aim to understand the meso-level processes and outcomes of practice diffusion that influence micro-level actions and have macro-level repercussions. Both secondary (historical) and primary (ethnographic) data are used to investigate how elements of a practice (meaning, material, and competence—Shove et al. 2012) move across cultural contexts and enable practice diffusion.

We begin with an overview of prior consumer-based diffusion research (Rogers 2003; Gatignon and Robertson 1985), scholarly directives for a deeper understanding of practice movement and change (Goldberg and Stein 2018; Schatzki 2019; Shove et al. 2012; Shove, Trentmann, and Wilk 2020), and consumption-related discussions of practice theory (Schau et al. 2009; Warde 2005). We then present the process theoretic (Giesler and Thompson 2016)

and historical approach (Karababa and Ger 2011) to our empirical study and provide details about our multi-source dataset. The historical data draw attention to the importance of noncarriers in practice diffusion. Practice alignment and embeddedness are revealed as underlying dimensions of practice reproduction. Our findings contribute to the understanding of consumer diffusion by mapping out a specific meso-level process of practice emergence and highlighting the role of noncarriers in the adaptation (rather than adoption) of practices. We contribute to the consumption-based practice literature by revealing particular types of reproduction and the dynamic and nested nature of systems of practices in which a practice becomes embedded. Implications for consumers, businesses, and policy makers are highlighted to show how collectives can support the spread of desirable practices and hinder the diffusion of others. We conclude with limitations of this study and future research directions.

CONCEPTUAL BACKGROUND

Consumer Diffusion

Traditional diffusion studies typically explore the flow of various phenomena (e.g., ideas, services, information) by measuring the rate of adoption, the pattern of adoption, and/or the potential penetration level of adoption often by tracing changes in sales within a particular market segment (Gatignon and Robertson 1985, 858). This extensive body of literature investigates diffusion primarily as a communication theory (Rogers 2003), highlighting the different roles of individual "adopters" in enabling, accelerating, and decelerating (e.g., S-shaped curve) the diffusion of innovations along a curvilinear trajectory within particular social structures. More specifically, Rogers (2003) recognizes that adoption speeds and patterns are influenced by a continuum of adopters: innovators, early adopters, early majority, late majority, and laggards. Thus, much attention has been paid to characteristics, cognitive processes, and perspectives (Goldberg and Stein 2018) of adopters.

Gatignon and Robertson (1985) introduce *consumer dif-fusion*, which underscores the centrality of adopters and highlights the importance of consumers, social systems, and technology in diffusion of products, services, and ideas. In general, this research stream investigates consumers as the focal unit of analysis and their acceptance (Bruner and Kumar 2005; Davis 1989), adoption (Hoehle, Scornavacca, and Huff 2012; Ko, Kim and Lee 2009; Ziamou and Ratneshwar 2002), readiness (Lin, Shih and Sher 2007), and resistance (Garcia, Bardhi and Friedrich 2007; Lee and Coughlin 2015) of new market offerings. Consumer diffusion research also reveals consumer characteristics (Wood and Swait 2002), perceptions (Ostlund 1974), and cognitive adoption processes (Ozanne and Churchill 1971) that influence the "spread of new ideas,

new practices and new products" (Gatignon and Robertson 1985, 863).

The emphasis on adopters in consumer diffusion research points to innovation as a democratized phenomenon (Von Hippel 2006) that involves "varied contributions many actors and histories make to what is, as a result, an inherently uncontrollable process" (Pantzar and Shove 2010, 459). In this way, diffusion is less of an outcome and more of a cocreative process requiring ongoing engagement from a variety of market-related actors, including consumers, organizations, and policy makers (Vargo, Akaka, and Wieland 2020). The consideration of diffusion as a joint social process requires a shift away from studying aggregated product sales, to investigating the nature of actions and interactions among multiple market-related actors (Vargo et al. 2020). Although prior diffusion studies reveal macro-level measures of adoption and micro-level characteristics of adopters, the extant literature generally lacks consideration of the meso-level processes that influence the dispersion of a new product or idea, particularly across diverse sociocultural contexts. Furthermore, this focus on product adoption and individual consumer adopters fails to account for social changes required to support diffusion (Vargo et al. 2020).

There are a few notable exceptions of meso-level perspectives on diffusion. Arnould (1989) empirically extends Gatignon and Robertson's (1985) work by foregrounding diffusion's socioeconomic context and its impact on crosscultural movement of novel products. He provides an ethnographic account of four cases in Zinder Province of Niger Republic, which reveals diffusion as a joint process with collective outcomes. Across these meso-level contexts, "social imitation is high and personal influence operates very powerfully on a local scale to mold preference" (Arnould 1989, 255). Hedström, Sandell, and Stern (2000) examine the impact of meso-level networks on diffusion where potential adopters need not know one another and find that the travel routes of political agitators influenced social movement diffusion akin to a contagion effect. Along a similar vein, Goldberg and Stein (2018) find that people learn meanings from their meso-level social environments, independent of networks and traceable social contagion, which enable them to associate between cultural practices. They demonstrate endogenous emergence of differentiation based on semantic cognition (common meanings) that impact diffusion (e.g., linking smoking and uniform wearing to violence or studiousness). Further, Fisher and Price (1992) find perceived meso-level social approval and macro-level (i.e., cultural) group influence directly effects personal and normative outcomes from early adoption.

These studies mentioned above draw attention toward the impact of meso and macro levels of social influences on consumer adoption (Centola 2015; Hedström, Sandell and Stern 2000). However, overall, consumer research pays limited attention to the diffusion of social phenomena

in general, and practices (Schatzki 1996) in particular, as they move across national and other cultural contexts. Further, although different levels of social structures have been recognized as facilitators and influencers of diffusion, the meso-level processes that drive diffusion are not well-understood. Because practices are revealed through actions and interactions among people, the study of practice diffusion can aid in explaining the process through which practices, and their associated products, ideas, and actions, spread across diverse sociocultural contexts and the social consequences of such diffusion.

Practice Movement and Change

Practice theories include a fragmented collection of perspectives regarding how a social practice, as a nexus of understandings, doings, and sayings (Schatzki 1996), is reproduced, stabilized, adapted, and embedded (Shove et al. 2012; Reckwitz 2002; Warde 2005). Importantly, research that explores how practices move (Maller and Strengers 2013) and change (Shove and Pantzar 2005) help bridge prior consumer research regarding diffusion and practices; they provide insights into the process of practice diffusion. For example, the study of practice evolution how practices change over time—reveals technical, social, and cultural elements that influence integration and appropriation of routines, rituals, and other regularly performed activities (Hand and Shove 2004; Hand, Shove, and Southerton 2005; Shove and Southerton 2000). Changes in practice can be studied within a particular social structure (e.g., family, community, country) or as they "travel" across sociocultural (e.g., cross-national) borders. Practice migration (via travelers) is a particular way for practices to spread and change (Maller and Strengers 2013). In both cases, a practice can be adapted through shifts in wider sociotechnical structures, that include social, cultural, and material artifacts that shape daily life (Hand et al. 2005).

Shove et al. (2012) extend the work on practice movement and change and assert the need to consider various levels of analysis (micro, meso, and macro) to explore (1) how practices emerge, exist, and die, (2) elements of practices, (3) the role of practitioners or carriers of practice, (4) persistence and disappearance of bundles of practices, and (5) generation, renewal, and reproduction of practices. The authors draw on several practice theoretic views (Giddens 1984; Reckwitz 2002; Schatzki 1996) to develop an integrative and simplified framework depicting core elements in which "practices are defined by interdependent relations between materials, competences and meanings" (Shove et al. 2012, 24). In this framework, practice elements include: (1) materials or the technologies, tangible physical entities, and stuff that comprise objects; (2) competences that encompass skill, know-how, and technique; and (3) meanings which include symbolic representations, ideas, and aspirations (Shove et al. 2012, 14). It is important to note that

while practice theories foreground performance, the practice elements are inherently dependent on people. Meanings are inextricably tied to carriers and noncarriers of a practice who create and perpetuate them. Materials and competences require carriers who construct or assign artifacts and develop knowledge and skill needed for a practice to be enacted.

Explication of practice elements highlights a "distinction between elements—which can and do travel—and practices, viewed as necessarily localized, necessarily situated instances of integration (which do not travel)" (Shove et al. 2012, 39). Although all three elements are needed for a practice to be performed, each element can move separately, lay dormant, and be integrated uniquely into a given social structure. For example, practice memories (Maller and Strengers 2013) are recognized as a means for practice transfer that is not observed as a performance but are passed on from one generation to another and remain hidden until something triggers its resurrection. This suggests that although practices must be performed to be reproduced (Schatzki 1996), particular practice elements can and do move across time and space (and across generations) independently (Hui, Schatzki, and Shove 2016). To understand how a practice diffuses across diverse sociocultural contexts, it is critical to examine the movement of practice elements and their linkages with each other and with other systems of practices (Schatzki 2019).

Systems of practices can be studied at a macro level (e.g., national) and at lower-level cultural contexts (e.g., subcultures, religion, markets, and families). Organizational studies have begun to explore how management practices are adapted as a new technology is introduced within and across different organizations, constituted by distinct interorganizational systems of practices. Ansari, Fiss, and Zajac (2010) assert prior organization studies generally focus on understanding practice adoption, only capturing an organization's initial efforts and outcomes of diffusion, without considering how a practice may change as it is diffused over time and across different organizations. The authors propose a conceptual practice adaptation framework, which highlights differences in practice "frames" and accounts for changes in practice enactment throughout an extended diffusion process.

Although this research points to adaptation as an important factor in practice diffusion, it does not empirically examine how practices are adapted; nor does it account for their diffusion beyond an organizational context. Prior research on practice movement and change informs our understanding of diffusion. However, these studies tend to focus on integration of a practice within a particular context and pay limited attention to the spread of a practice across a wide array of sociocultural contexts. Investigating the dispersion of cross-cultural consumption-based practices is a critical step to advancing consumer research on diffusion and practices. To set up for our empirical

investigation of practice diffusion across cross-national, cross-cultural contexts, we unpack the relationship between consumption and practices below.

Consumption as Practice

Advances in practice theorization across philosophy and sociology (Giddens 1984; Reckwitz 2002; Schatzki 1996) have paved a pathway for studying consumption as practice (Halkier, Katz-Gerro and Martens 2011; Warde 2005). A growing body of consumer research explores important facets of consumption in a variety of practices, and provides insights into how practices support and enable marketmediated experiences (Canniford and Shankar 2013; Seregina and Weijo 2017; Woerman and Rokka 2015), establish habits/routines (Epp et al. 2014; Phipps and Ozanne 2017), influence identity (Akaka and Schau 2019; Arsel and Thompson 2011; Sandikci and Ger 2010), support sustainability (Sahakian and Wilhite 2014), and shape social structures (Arsel and Bean 2013; Schau et al. 2009). Importantly, consumer research generally presumes practices reproduce (or not) through carriers' (Shove et al. 2012) consumption efforts within a variety of social structures (e.g., families, subcultures of consumption, and taste regimes).

The persistence of a practice is a key component in studying consumption as practice (Warde 2005). According to Thomas and Epp (2019, 565), "practice theories describe how society is produced and reproduced, focusing on how individuals create and live within their social worlds (Bourdieu 1977; Giddens 1984)." In this way, a practice is more than a single act; it is an enduring entity that, when enacted, reveals an underlying social structure (Schatzki 2019; Shove et al., 2012). Distinguishing practice theories from psychology-based views on consumer behavior (Arnould and Thompson 2005) is that a practice cannot reproduce through only one person's actions, it requires collective performance. Further, practices manifest in performance, therefore if a practice is not performed its existence is indeterminate (Schatzki 2019, 29).

Akin to much of the work in practice theory, extant consumer research tends to explore how existing practices are reproduced by carriers within particular systems of practices (Epp et al., 2014; Phipps and Ozanne 2017; Schau et al. 2009). However, consumer research also points to disruptions that often occur as a practice moves across different sociocultural contexts. Askegaard and Eckhardt (2012) find that yoga's exportation from and reintroduction to India changed the practice, as well as the sociocultural influences of its carriers. Disruptions may also occur as social structures that frame a practice evolve (Arsel and Thompson 2011; Goulding et al. 2009; Phipps and Ozanne 2017; Sandikci and Ger 2010) and as threats to individual and societal well-being disrupt norms, routines, and daily activities (Campbell et al. 2020). Recent attention to practice misalignment (Epp et al. 2014; Thomas and Epp 2019) explains why practices often fail to be adopted within social (familial) structures even as potential carriers make efforts to reproduce practices to solve particular problems. These studies highlight the fragility of practices among carriers but are largely silent on the impact of noncarriers on practice performance.

Prior consumer research suggests changes in practice help to reconcile social disruptions by reconfiguring systems of practices and allude to the influence of noncarriers on practice reproduction. Shove and Pantzar (2005), for example, study the evolution of Nordic walking across different countries. They argue that traditional views on product diffusion do not account for change that occurs as different sociocultural structures pick up a practice and reconfigure it as their own. In their view, practices are "homegrown," rather than diffused because they take on new meanings, competences, and materials as they spread. This draws attention to the situated systems of practices that exist within a particular culture—national or otherwise—that establish social norms and meanings, which structure a particular sociocultural context. These systems of practices (pre-existing assemblages of understandings, doings, and sayings) are shaped by actions and interactions of both carriers and noncarriers and must allow for the integration of a new practice in order for practice diffusion to occur (Schatzki 2019).

Sandikci and Ger (2010) find that practices transform through changes in the wider social structure in their study about how the stigmatized practice of veiling became fashionable over time. Arsel and Thompson (2011) explore how and why carriers enact the "indie" practices of producing artistic creations sold outside mass marketing channels that run counter to the marketplace "hipster" myth. Goulding et al. (2009) investigate how rave practices become managed by development of largely noncarrier market norms. Phipps and Ozanne (2017) demonstrate how disruptions in routine use of water are caused by exogenous natural phenomena like draughts that strain resources, create insecurity, and inspire governmental water conservation practices that challenge existing domestic water-reliant practices from doing laundry to toilet flushing. Thus, practices only exist as they are reproduced, but as consumption occurs over time and across social structures, practices evolve and change and allow for continued reproduction (Askegaard and Eckhardt 2012; Sandikci and Ger 2010).

In sum, consumer research highlights the complexity of integrative practices (Schatzki 1996) as they relate to consumption and punctuates vulnerabilities in practice reproduction that potentially hinder practice diffusion as misalignments in broader sociocultural contexts occur. Practice carriers' responses to local practice disruptions often reconfigure practice elements and align adjacent practices (Thomas and Epp 2019). Disruptions to wider social processes also influence practices, and, conversely, enduring practice modifications can reshape social structures. Research documents practice diffusion influences families

(Epp et al. 2014; Thomas and Epp 2019), consumption collectives (Canniford and Shankar 2013), fields-of-consumption (Arsel and Thompson 2011), and marketplaces (Goulding et al. 2009). However, how practices reproduce over time and across diverse cultural contexts is not well-understood. We address this gap by empirically investigating processes and outcomes of practice diffusion.

METHOD

Overview

Our historical analysis is guided by the work of Karababa and Ger (2011) and a process theorization approach that focuses analytical attention on change occurring in social collectives (Giesler and Thompson 2016). We ground our exploration in three research questions related to practice diffusion, presented above. To study the diffusion of surfing across time and space, we rely on primary and secondary data, which have been analyzed in multiple and iterative phases. Change is made manifest in events and processes (Schatzki 2019), ergo we utilize event-based data and analytical bracketing to organize events and identify shifts in power (Giesler and Thompson 2016, 502) that, in our context (surfing) and with our interpretive lens (practice diffusion), reveal how (process) surfing spread cross-culturally and cross-nationally, over time.

Part of the challenge of understanding practice diffusion is the tendency to focus on studying practices as microphenomena without considering their embeddedness within meso- and macro-structures (Akaka, Vargo and Lusch 2013). Askegaard and Linnet (2011, 381) argue

there is a need for bridging the analytical terrain between the anthropological search for thick description and deep immersion in the field, and the sociological inclination towards broad social theories and movements that are often quite remote from the emic illustrations of everyday life experiences.

Our unit of analysis, or conceptuality (Schatzki 2019), is a practice. However, we examine a practice from multiple views. We trace the movement of practice elements through micro-level actions of practice carriers across diverse sociocultural contexts and investigate meso-level processes that drive diffusion of a particular practice, surfing. We frame this analysis within a macro-level lens of a complex and varied cross-cultural and cross-national context. We intersect emic perspectives and experiences with etic views of aggregated social action and movement to better understand how everyday practices and experiences constitute society.

We examine what Giesler and Thompson (2016, 500) call topological change, or "shifts in patterns of power relationships." These displacements and alterations in the practice (Giesler and Thompson 2016, 503) of surfing

occur through changes in relationships (Dahl 1957) and events that disrupt status quo interactions, norms, and routines (Campbell et al. 2020). Based on precipitating tensions, we identify three primary power (i.e., relational) shifts that occur among those who actively engage (i.e., old and new carriers) with surfing and those who do not (noncarriers). The power shifts among carriers and noncarriers reveal the importance of noncarriers (e.g., nonadopters) in practice diffusion. Building on Arnould (1989) and Fisher and Price (1992) who recognize the importance of meso and macro levels of social context on consumer adoption, we analyze power shifts framed by cross-cultural and cross-national contexts and what we call, "historical epochs" that reveal critical junctures in the diffusion of surfing. This historical cross-national study reveals that practice diffusion is often promoted or restricted by efforts of "elites" who serve as gatekeepers of a practice, as well as cultural entrepreneurs who "popularize" that practice (Kaufman and Patterson 2005). This research involved 11 years of data collection (2009–2020; see table 1) and multiple rounds of analysis, in which we iterated between data and theories to interpret our findings.

The historical and ethnographic data serve as a frame for understanding, discussing, and vetting symbolic representations and skillful performances (Arnould and Price 2000) related to surfing. We unpack how power shifts among carriers and noncarriers influence the diffusion of surfing. We approach these data from a practice plenum (Schatzki 2019), or ecosystems perspective (Giesler 2008; Vargo and Lusch 2016), that allows us to consider how events, practices, and processes fit together into an extended sociohistoric, cross-national narrative. Below, we describe our research context, historical data, primary data, and process theorization approach.

The Context: Surfing

Surfing is the act of riding across the face of a breaking wave. The origins of surfing are ancient. There is evidence that some form of surfing took place in diverse island and coastal areas in different parts of the world, from the Polynesian Islands to northern coasts of Peru (Gilio-Whitaker 2016), to the shores of Africa (Dawson 2018). However, most modern accounts recognize surfing, or "surfriding" (Moser 2008) as a practice that began across a number of Pacific island chains, including Hawaii, Tahiti, Samoa, and Tonga. According to Dawson (2018, 54), "While surfing in Africa physically resembled Polynesian surfing, it remained at a relatively rudimentary level, never developing into a complex sport with considerable social and cultural meaning as it did in Hawaii." Historical documents indicate surfing was central to ancient Hawaiian culture and embedded in everyday life (Finney and Houston 1966). Furthermore, Hawaii is often considered the "birthplace of surfing" (Finney and Houston 1996) and

TABLE 1

ARCHIVAL AND ETHNOGRAPHIC DATA

Data type	Timeframe	Description
Data type		Description
Archival		
Historical Narratives and Artifacts	1778–2014	Historical narratives of surfing history (50+) Artifacts in the Hawaiian Archives and International Surf Museum: photographs (200+), surfboards, early documents/ letters from explorers, and missionaries (20+),
Movies and Videos	1954–2019	Movies instrumental in shaping surfing culture—e.g., <i>Gidget</i> , <i>Endless Summer</i> (30+). Online videos, posted on YouTube, Facebook, or other public sites (1300+). Video clips from Eric Jordan's interviews for the film, <i>Paving the Wave</i> (30+).
Articles	1960–2019	Surfer, Surfing magazines, National (U.S.) and local (Hawaii) newspapers and magazines archived in the Contemporary American English Corpus database.
Ethnographic		
Interviews	2009–2020	In-depth interviews and oral histories surfing historians and notable members of surfing culture (20). See Table 2.
Observations	2009–2020	Direct Participant: Surfing and Spending time with Surfers, vol- unteered at surfing competition, wrote articles for magazine; Passive Participant: observing surfers, surf shops, and surfing contests, patronizing surf-related businesses.
Photographs	2009–2020	Author generated photographs of surfers, contests, surf scenes, and interviewees (600+).
Websites	2009–2019	Observed website postings and articles.

some have suggested that surfing is Hawaii's greatest gift to the world (Hemmings 1977).

The colonization of Hawaii, which began in the late 18th century, brought European ways of life that altered local Hawaiian culture, within which surfing was an integral part. Over time, the indigenous practice evolved into a global consumer culture (Canniford 2005). Studies show modern-day meanings inspire surfing engagement (Beverland and Farrelly 2010; Canniford and Shankar 2007; Ford and Brown 2006; Schau 2003) and historical accounts depict evolution of cultural meanings (Kampion 2003; Walker 2011; Warshaw 2010; Westwick and Neushul 2013). Canniford and Karababa (2013) trace an historical discourse of surfing, which reveals primitive perceptions continue to influence the surfing narrative. Their study highlights the strength of early impressions and emphasizes how views of "otherness" emerge from multiple origins.

Historical Process Data

Chronological accessibility of surfing diffusion requires the ability to track the spread of a particular practice across time and space (Giesler and Thompson 2016). Shove et al. (2012) emphasize the materiality of practice and the need to observe the movement of practice elements (material, competence, and meaning) and how they intersect with other practices and social phenomena as they integrate into different life worlds. While the complete pollination of surfing around the globe is beyond the scope of our study, we examine how surfing, as a complex, "integrative"

(Schatzki 1996) practice, moves across diverse sociocultural and cross-national contexts. We focus on studying this practice as an entity (constituted of multiple elements) and a performance (enacted by multiple actors). We adhere to Shove et al.'s (2012, 7) assertion that

[i]t is through performance, through immediacy of doing, that the "pattern" provided by the practice-as-an-entity is filled out and reproduced. It is only through successive moments of performance that the interdependencies between elements which constitute the practice as entity are sustained over time.

We investigate how a preexisting practice, in this case indigenous to a particular geographical location, is performed and reproduced over time and space. That said, any historical analysis requires a starting point and a general path of progression, or else history cannot be traced.

Similar to Karababa and Ger (2011), our data consist of various archival sources, such as biographies and autobiographies of famous surfers; and oral narratives and narrative histories (second-person accounts of particular people and events per Belk 1992). While we explore popular press historical narratives, such as *The History of Surfing* (Warshaw 2010), *The World in the Curl: An Unconventional History of Surfing* (Westwick and Neushul 2013), *Empire in Waves: A Political History of Surfing* (Laderman 2014), and *Stoked! A History of Surf Culture* (Kampion 2003), we also utilize books written by surfing historians from Hawaii and the Pacific, such as *Hawaiian Surfing* (Clark 2011), *Waves of Resistance* (Walker 2011), and *Pacific Passages: An Anthology of Surf Writing* (Moser 2008), as well as those writing about other early beach

TABLE 2
INFORMANTS FOR IN-DEPTH INTERVIEWS

Name	Gender	Age	Engagement with surfing
Dave	Male	33	Surfer
Barbara	Female	37	Surfer, Former Manager at Surf Shop
Kristy	Female	38	Surfer
Jeff	Male	42	Surf Instructor
Amy	Female	36	Surfer, Former Competitive Surfer
Dennis*	Male	68	Surfer, Surfboard Shaper
Fred*	Male	73	Surfing World Champion, Founder of Professional Surfing
Tom*	Male	70	Surfer, Founder of Charitable Surfing Organization
Courtney	Female	33	Manager of Surf Coffee Shop
Kalei	Female	31	Surfer, Former Pro Surfer
Chris	Male	73	Surfer, Former Pro Surfer, Entrepreneur
Eric	Male	55	Surfer, Founder of Charitable Surfing Competition
Rick	Male	46	Manager of Surf Shop
Mark	Male	42	Publisher of a Surfing Magazine
Tim*	Male	61	Surfer, Surf Historian
Ronald	Male	56	Surfer, Former Surfing Contest Organizer
Kara	Female	23	Surfer, Manager of Surfbrand Store
Steve	Male	34	Surfer
John*	Male	73	Surfer, Surf Historian
Corky*	Male	72	Surfer, Former Pro Surfer, Journalist, Entrepreneur

^{*}Real names and ages of notable people in surfing culture. Pseudonyms and ages at time of interview are used for the others.

cultures, such as an Australian Beach Cultures: The History of Sun, Sand and Surf (Booth 2001) and Undercurrents of Power (Dawson 2018). We include memoirs written by prominent surfers such as Not Done Yet (2020) by former professional surfer Corky Carroll and The Soul of Surfing by Hemmings (1997), one of the founders of professional surfing, who both participated as informants in our ethnographic inquiry. We interviewed surfing historians and historical figures (e.g., contest organizers, surfboard shapers, and entrepreneurs) who contributed to the evolution of surfing to verify archival data and better capture specific first-person, emic accounts of events integral to practice diffusion (table 2). We focus on investigating how elements of a practice move and the process(es) through which a practice diffuses.

Primary Data

We follow methods outlined by Schouten and McAlexander (1995), including in-depth, semi-formal (table 2) and informal interviews, observation, and photography to capture local emic perspectives and connect them to the practice of surfing.

To account for a variety of market actors and diverse perspectives, observation sites, and interviewees were purposively selected. A protocol was used to guide the indepth interviews and researchers probed as needed. Two of the researchers are characterized as participant observers (e.g., access to the setting as practitioners independent of research project) and as complete participants (e.g., insider status as practitioners; Gold 1958). They spent considerable amounts of time as members of local surfing cultures prior to the initiation of this study and compared experiences to verify common and distinct local systems of practices. This emic experience enables intimate access to the practice and its elements. The third author provides a non-participant lens for analyzing data and developing theoretical connections and contributions.

Analytical Bracketing and Theoretical Focusing

To analyze our diverse historical dataset (Karababa and Ger 2011) and interpret our findings, we utilize two phases as promoted by Giesler and Thompson (2016): analytical bracketing and theoretical focusing. In the initial investigation phase, we group together sequences of events that reflect movement of practice elements, which enables us to make the transition from empirical to analytical change. Tracing elements of practice across space and time permits us to identify specific linkages among materials, competencies, and meanings as well as connections from one sociocultural context to another.

To investigate how these social changes occur, we apply a topological (Collier 2009) approach for analysis, which allows us to assess varying points of discontinuity. We identify events in which major shifts in power (i.e., relationships), among those who actively engaged with surfing (old/new carriers) and those who did not (noncarriers), anchor social change (Schatzki 2019). This theoretical focusing considers cross-cultural and cross-national power shifts that coincide with movement of practice elements and reproduction of a practice over time. Longitudinal analysis reveals aggregation of practice diffusion and lasting social change in which "Reality 1 is connected to Reality 2 through a complex series of historical contingencies. Rather than following an orderly structural logic, historical processes unfold through struggles over various kinds of resources that continuously disrupt status quo relations, unanticipated consequences, and topological displacements" (Giesler and Thompson 2016, 5). Hence, the findings section is chronological, but we recognize events overlap and co-occur across space.

We use a variety of archival sources, including newspapers, magazines, photos, websites, movies, and music, which serve as surrogate data when first-person accounts were unavailable. We examine each artifact as an individual representation of one or more elements of the practice and then consider its relation to the wider sociocultural

context. We completed our analysis when we reached saturation and no new insights emerged from our data. This approach enables us to oscillate across various levels of social phenomena (Karababa and Ger 2011) that constitute the surfing ecosystem and frame the practice (Akaka et al. 2013; Chandler and Vargo 2011). We pay particular attention to the role of consumption as an integral part of practice. This process theorization approach, focusing on an enduring recognized practice, leads us to identify historical surfing epochs where major power shifts occur among carriers and noncarriers. It also allows us to map the recursive practice diffusion process and how meso-level outcomes of practice reproduction feed into micro-level actions and macro-level structures and drive social change.

PROCESS OF PRACTICE DIFFUSION

We find practice diffusion is driven by practice emergence across sociocultural contexts as practice elements materials, meanings, and competences—are linked to each other and with various systems of practices (e.g., religions, laws, markets, businesses, sports, families) through iterative processes of transposition, codification, and adaptation. Importantly, our data show that whereas prior consumer diffusion research emphasizes consumers as adopters, we find practices are not adopted as-is, but rather are adapted as they recursively (re)emerge within systems of practices. Furthermore, we advance our understanding of consumption as practice by revealing a multilevel process of practice diffusion and a various outcomes of practice reproduction influenced by both carriers and noncarriers. Figure 1 extends the description of practice elements and their linkages as discussed by Shove et al. (2012) by depicting a recursive process of practice diffusion derived from our data. For visual and explanatory simplicity, we map the process for a single practice but recognize that practice diffusion occurs within an entanglement of situated practices and practice elements may move independently across multiple systems of practices as elaborated in figure 2 and evidenced throughout our historical epochs below.

In line with consumption-related practice research, we see practice reproduction as a core outcome of practice emergence and central to practice diffusion. In this extended study of the meso-level process and outcomes, we find a practice is reproduced in more than one way and can be observed through changes in both macro-level structures and micro-level actions. Each process is influenced by original practice elements and systems of practices into which these elements transfer. Importantly, our data illuminate how practice diffusion can recursively reconfigure elements of a practice. As a practice emerges and is reproduced it alters systems of practices at a meso level. These systems of practices underpin social structures, such as

families, organizations, and communities. As an emergent practice becomes embedded within different systems of practices, macro-level social structures, such as national culture, may change.

The study of surfing diffusion reveals that over time, sustained changes can be seen at a macro level in broad sociocultural shifts (e.g., Olympic status signifies legitimation and growth of a practice) and through micro-level actions (e.g., increased enactment of a practice across cultures). We offer that while this process figure appears temporally sequential, it is not. The reality this figure depicts is messy, as element movement is not mutually exclusive and practice emergence processes can simultaneously occur. Furthermore, our exploration of social phenomena from varying micro, meso, and macro perspectives recognizes that these levels are relative and not fixed (Vargo, Wieland and Akaka 2015)—a given practice is embedded within nested systems of practices such as families, cities, and countries and the level of analysis is relative to other levels of nested social phenomena. Importantly, this investigation of meso-level process reveals concurrent meso-, macro-, and micro-level outcomes.

Like Kuhn's (1962) description of coexisting paradigms, we assert that practice diffusion outcomes coexist, but that each epoch is characterized by shifts in power among practice carriers and noncarriers as a practice emerges and reemerges and increasingly connects various systems of practices (e.g., sports, religion, family, markets). We start with a description of our findings as they relate to practice elements and systems of practices and follow with the processes of practice emergence and forms of practice reproduction revealed in our data. We then provide supporting details, bracketed within the historic surfing epochs uncovered through our analysis.

Practice Elements and Systems of Practices

Canniford (2005, 215) recognizes the entanglements of practices by stating "[s]urfing exists as a complex culture to be found between and within other complex cultures," which, in our data, reflects the myriad of ways religion, law, markets, sports, and family are intertwined with surfing. He argues that in studying such an enduring and diverse cultural practice, researchers should not limit themselves to one place/space to develop insights. We heed this call by engaging in a cross-national historical analysis to answer three research questions. Our answer to the first question (how does a practice diffuse?) is that practice diffusion is driven by a recursive process of practice (re)emergence as all three elements link together and to other systems of practices. Figure 2 extends Shove et al.'s (2012) framework of element movement and depicts the linking of a material with a meaning embedded within other systems of practices.

Macro-level Structures (e.g., National Culture) **Practice Emergence in Systems of Practices Practice Adaptation** Meso-level **Practice** Alignment among Material, Competence **Outcomes of** Transposition **Recognized Practice** and Meaning and other practices in **Practice Emergence** new/old Sociocultural Context Alignment between Material and Meaning **Practice Elements Practice Reproduction** Meaning Demarcation Imitation Acculturation **Practice** Codification Innovation Alignment between Material Competence Competence and Meaning Micro-level Actions (e.g., Practice Enactment)

FIGURE 1

RECURSIVE PROCESS OF PRACTICE DIFFUSION

Importantly, we find that a practice element, such as a surfboard (e.g., material), can move independently and be linked to other practice elements (e.g., competence and meaning) that exist within other systems of practices (e.g., fishing and boating practices in Bangladesh). Our findings indicate that, indeed, practice emergence requires the elements of material and meaning to be linked with competence as well (Shove et al. 2012). We extend prior consumer research on diffusion and practice by highlighting the nested and evolutionary nature of systems of practices (e.g., religions, families, markets) through which a practice emerges as it is adapted across time and space. We find that practice diffusion is influenced by aggregated systems of practices in such a way that the relationships among micro, meso, and macro levels of social phenomena must all be considered to understand how a practice is diffused. Figure 2 includes dotted lines to reflect the open nature of practices and systems of practices (Schatzki 2019) and continual movement of practice elements as they are transposed, codified, and adapted.

This investigation of *material* movement focuses on tangible resources (e.g., equipment and clothing) needed to engage with the practice of surfing. *Competence* includes skills for proper execution of surfing, surfboard shaping or

making surfboards and equipment, and sport contests. *Meaning* involves symbolic representations, such as brands and music, links to religion, nature, competition, lifestyle, athleticism, and ties to counterculture, subculture of consumption, and popular culture. Although we trace each element independently, we find that in some cases, there is overlap and "if practices are composed of materials, meanings and competences, histories of practice need to take note of the conjunction of *all three elements at once*" (Shove et al. 2012, 28, emphasis in original). Our data help us to understand the linkages among practice elements and their connections to broad sociocultural contexts that underlie each epoch.

More specifically, our data demonstrate that materials and competences can be transferred by practice carriers (Shove et al. 2012), in a variety of ways, such as surfing in new areas, developing ways to produce materials, selling surf-related products and services, and competing with other practice carriers. Materials may travel on their own (e.g., a surfboard washes ashore, or a t-shirt is gifted) and this is a common entry point for practices to spread (Shove et al. 2012). However, sometimes material movement is not enough, and media (e.g., movies, music, sports channels, magazines, and books) plays an important role,

Linked Elements of Practice

Meaning

Competence

Material

Material Movement

FIGURE 2
ELEMENTS AND SYSTEMS OF PRACTICES

Systems of Practices

particularly in the movement of meanings, because even without materials and competences, meanings can travel through images, descriptions, and stories. Contests are an impactful mode of transport, as they bring together the three practice elements in specific ways through celebrity athletes, brand sponsorships, and contest rules. We observe surfing emerge within unique sociocultural contexts when all elements are linked with each other and with other systems of practices and reproduce a practice. We find that noncarriers of surfing can impede or fuel practice diffusion, especially as practice elements become embedded within foreign systems of practices. This disruption can alter the elements or integrate new elements and reshape a practice as it (re)emerges.

Practice Emergence

We answer the second research question (what processes drive practice diffusion?) by identifying transposition, codification, and adaptation as specific processual links that connect materials, meanings, and competences with each other and with other elements of practice in other systems of practice. These processes/linkages are influenced by practice carriers and noncarriers. In line with Shove and colleagues (2012), we find that meanings are central to

connecting three elements and serve as a bridge to other practices within new systems of practices. Our data highlight the need to consider noncarriers' perspectives in practice emergence because they may associate materials and competences with alternative (possibly contradicting) meanings. These are often viewed at a macro level in the broader sociocultural context that frames practice diffusion, or at a micro level in specific actions of noncarriers.

Our findings reveal *transposition* (links between materials and meanings) as the process through which material artifacts transfer across social structures and meanings arise. We find that this process is essential in practice diffusion because it connects materiality of a practice with other sociocultural contexts, in which material artifacts, when separated from original contexts, can take on new meanings. When meanings of a material diverge, reconciliation is needed for transposition to occur. However, reconciliation does not always lead to convergence of meaning and can result in various outcomes of practice diffusion. We find that transposition centers on the movement of material artifacts (equipment and clothing) and, as surfing spreads and evolves, materials become more readily available through markets and retailers, and diffusion increases.

Codification links meanings and competences, as the process through which skills and knowledge are decoded

and encoded across diverse sociocultural contexts. We find that this is essential to practice diffusion because it communicates the competences required to engage with a practice and integrate it into other systems of practices that often bring about new meanings. Alternative meanings lead to reinventing competences required to engage with a practice and reshape social structures that embed that practice. In this study, codification includes aligning meanings around what surfing is, how to do it, and how to make, maintain, and repair equipment. This process occurs through storytelling, magazines, movies, services, and contests.

Adaptation is the link among all practice elements and systems of practices embedded within original and new social structures. It allows for creative practice engagement, which can result in changes to a practice itself (Thomas and Epp 2019). Practices do not diffuse across cultural contexts without adaptation because linkages connect elements of a particular practice and embed those elements within other systems of practices. The links among practice elements and systems of practices support the adaptation, emergence, and diffusion of a practice. These adaptation-based changes feed into macro-level (e.g., national) structures and micro-level (e.g., practice engagement) actions and alter the composition and extend the reach of that practice.

Practice Reproduction

We answer the third research question (what are the consequences of practice diffusion on practice reproduction?) by identifying demarcation, imitation, acculturation, and innovation as different ways in which practice reproduction occurs through consumption (how people create value for themselves-Warde 2005). Practice reproduction is a central means for perpetuating practices within a given social structure (Giddens 1984; Schatzki 1996; Shove et al. 2012). Prior research on consumption-based practices (see Consumption as Practice section) provides important insights into how practices evolve but is limited in its explanation of how these changes continually (re)occur over extended time and space, and how these processes recursively feed into macro-level structures and micro-level actions that shape a practice. Our findings add to this discourse by extending the scope of practice emergence and identifying alternative forms of practice reproduction that shift across three historical epochs and reveal the broader sociocultural impact of practice diffusion.

Practice demarcation occurs as elements of a practice become decontextualized from a sociocultural context and recontextualized in a way that does not align with another system of practices. During the first epoch, elements of surfing transitioned from their original cultural context, Hawaiian culture, and integrated with Western culture. Negative meanings of surfing during colonization by noncarriers resulted in a demarcation of the practice in such a way that it was marginalized from both its original and its new cultural context. Practice reproduction was limited as Hawaiians appeared to engage in the practice less frequently and only a few Westerners attempted to engage in the sport. Our analysis reveals that although surfing was misaligned with some Western systems of practices and perceived as hedonic or sinful by noncarriers, it could be reconciled with other Western systems of practices that made connections between the competences of surfing and meanings of adventure. Practice imitation occurs as elements of a practice are replicated by others who want to engage in a practice but may or may not be invited to do so. During the first epoch, this form of practice reproduction enabled the practice of surfing to continue (e.g., through the development of surf clubs) even though other, in some ways more dominant, social forces continued to hinder its reproduction.

The second and third epochs reveal shifts in practice reproduction as well. *Practice acculturation* occurs as elements of a practice are integrated and embedded within other cultural and national contexts. During the second epoch, what began as practice imitation and a countercultural movement becomes legitimized and commercialized, leading to practice reproduction through the growth of a large subculture of consumption. *Practice innovation* occurs as elements of a practice are unbundled and rebundled with other practices and structures and a practice, as an entity, transforms. During the third epoch, surfing is acculturated in many coastal areas as a way of life. However, different forms of surfing emerge, which require the introduction and reproduction of new competences, meanings, and materials.

THE SURFING EPOCHS

Our data reveal major topological shifts in the diffusion of surfing that are rooted in power transitions among carriers and noncarriers of the practice. We find that when the number of carriers is low, this shift in power is largely influenced by a transition in dominant meanings of a practice between carriers and noncarriers. However, as diffusion takes place and the number of carriers increases, practice reproduction occurs more frequently through innovation, and power shifts between groups of carriers (e.g., cross cultural) also appear. This extends prior consumer research on diffusion and practice by recognizing the importance of noncarriers in practice diffusion.

We map topological change of the cross-cultural and cross-national diffusion of surfing into three major historical epochs. These power shifts represent transitions in dominant forms of practice reproduction: from demarcation to imitation (Hawaiian to Western systems of practice); from imitation to acculturation (counterculture to

subculture of consumption), from acculturation to innovation (surfing as a single-facet to a multi-facet practice, connected to a multitude of cross-national systems of practices). We consider major social inequities that influence practice diffusion as we interpret and present our data, organized by epoch and following figure 1 above.

Epoch One: 18th—Early 20th Centuries

Practice Emergence. While surfing's origins are ancient, most modern accounts recognize it as a practice "discovered" in the Polynesian islands where variations of surfing, or "surfriding" as it was initially denoted (Moser 2008), were witnessed in island chains, including Hawaii, Tahiti, Samoa, and Tonga. Finney and Houston (1966, 13–4) emphasize how surfing is rooted in Hawaiian culture specifically and entangled in complex systems of practices,

Throughout the Pacific, no island group developed surfing to the level of sophistication attained in Hawaii in pre-European times. The sport was bound up with religion, sexual practices and the system of social classes. Songs of surfing feats were sung... Board builders... had ritual chants to precede their tasks... all levels of society surfed, and... achieved a proficiency in the water that has only recently been matched.

In pre-colonial times, Hawaiians surfed as recreation, as a means of creating and perpetuating social relations and as an instrumental part of worship, laden with rich, spiritual meanings.

The colonization of the Hawaiian Islands in the late 1700s introduced new systems of practices that did not align with pre-existing, local practices and perspectives (Arvin 2019). Although surfing was integral to Hawaiian culture, early Westerners condemned and actively discouraged surfing as they promoted alternative family, community, and religious practices. This juncture brought in new materials, competences, and meanings (practice elements), which altered local culture and separated surfing from the systems of practices in which it was originally embedded. As more foreigners became familiar with surfing, the meanings of surfing evolved.

Transposition. During this epoch, transposition involved the reappropriation of materials: surfboards, clothing, and even ocean waves. The materials used in surfing had drastically different meanings across Hawaiian and Western cultures. According to Moser (2008), whereas the Hawaiians saw the ocean and waves as blessings from their gods, the European tradition associated the ocean with disease and death. Further, for early Hawaiians, surfboards represented more than recreation, sport, or religious observation; they were central to daily life. Clark (2011) explains, "Hawaiians also used alaia surfboards as paddleboards for more utilitarian activities, such as nearshore fishing." Thomas Thrum describes surfboard crafting:

Upon selection of a suitable tree, a red fish called kumu was procured, which was placed at its trunk. The tree was then cut down, after which a hole was dug at its root and the fish placed therein, with a prayer, as an offering in payment... After this ceremony was performed, then the tree trunk was chipped away from each side until reduced to a board approximately of the dimensions desired, when it was pulled down to the beach and placed in the halau (canoe house) or other suitable place convenient for its finishing work. (1895, 108)

Thrum details how elements of nature were central to the materials and meanings of a surfboard itself (selecting the tree, sizing the board), spiritual symbolism (placing the fish inside a carved hole), and religious ceremony (dedication rites). Andrade (1995, 9) describes a strong communal spirit and traditional symbolic meanings tied to surfboards:

[On Ni'ihau] all boards had names and pictures painted on them, each associated with certain riders and certain families... a song containing all the names of the boards was composed and is sung as part of the [annual surfing] celebration. As the verse is sung in which the name of a certain board is mentioned, all family members related to the board or its riders, little children with change as well as adults, are expected to come forward and donate money to the common fund which is used to put on next year's pa'ina [party]. The song would be sung continuously until an appropriate sum had been raised.

Surfboards were individually named materials, designed for particular carriers, and incorporated into songs. They were essential components of communal celebrations and Hawaiian families traced their heritage through a board.

Foreign visitors did not have the same appreciation for the material artifacts of surfing (boards and clothing). Clark (2011) cites explorer Bingham (1847, 137), shedding light on how Western influences and alternative materials and meanings influenced surfing.

The decline or discontinuance of the use of the surf-board, as civilization advances, may be accounted for by the increase of modesty, industry or religion, without supposing, as some have affected to believe, that missionaries cased oppressive enactments against it.

Rather than a formal restriction of surfing, Clark suggests declining use of the surfboard, thus surfing, is due to a misalignment between surfing materials and new systems of practices associated with colonial religions, clothing, and emerging notions of work or industry.

Codification. The competences associated with surfing have deep-seeded meanings contributing to the development of both communal and competitive relationships among early Hawaiians. Codification of the practice was fueled by indigenous Hawaiians' willingness to help others engage with surfing. Because there was no written Hawaiian language prior to the arrival of European

explorers, the initial codification of the practice occurred through symbolic displays and verbal communication. Telling stories was one of the major forms of sharing the experience of surfing and passing along the practice, as well as its associated meanings, to future generations. Hawaiians documented events and traditions by singing chants or "meles" and by telling myths and legends (Moser 2008). Below is an excerpt from a mele inoa, or a name chant, used to recognize skills and events associated with an ancestor or loved one (Moser 2008, 36).

Na Kane i hee nalu Oahu He puni Maui no Piilani Ua hee a papa kea i papa enaena Ua lilo lanakilake poo o ka papa Ua nahaha Kauiki

Kane surfed on the waves of Oahu
And all around Maui, (island) of Piilani,
He surfed through the white foam, the raging waves,
The top of his surfboard in triumph rose on the crest
(As waves) crashed against Kauiki.

By narrating legends, myths and *meles* (songs) from generation to generation, the competences and meanings of surfing were codified and perpetuated within Hawaiian culture. At that time, wave-riding was practiced in various ways: lying flat on shorter, lighter boards, or standing on longer, heavier boards, with multiple people in a canoe, or without a board or boat at all. It was not only a way of life but also a sport. The native Hawaiians participated in surfing to compete and gamble. An anonymous writer in the Hawaiian Almanac and Annual for 1896 states,

Surf riding was one of the favorite Hawaiian sports, in which chiefs, men, women, and youth, took a lively interest. Much valuable time was spent... in this practice throughout the day...Betting was made an accompaniment... by the chiefs and the common people...Canoes, nets, fishing lines, kapas [cloth], swine, poultry and all other property were staked, and in some instances life itself was put up as wagers, the property changing hands, and personal liberty, or even life itself, sacrificed according to the outcome of the match, the winners carrying off their riches and the losers and their families passing to life of poverty or servitude. (Moser 2008, 126)

This excerpt reveals that surfing was a practice requiring measurable skill that enabled Hawaiians to recognize an adroit (skilled) performance, which enabled competition. Although, in general, Hawaiians appeared to engage in surfing with ease, it was obvious to foreigners that surfing took special skills and knowledge that the early explorers and missionaries did not have.

The shift from Hawaiian to Western codification made explicit links between competences and meanings,

separating surfing from its original cultural context, and encoding it with new narratives that were based on Western perceptions. When surfing was "discovered" by colonial explorers, Westerners did not surf, nor did they appreciate the skills required to ride the ocean waves (Arvin 2019). They could not comprehend how central surfing was to the survival and well-being of Hawaiian culture and community. Surfing was decoded by foreigners with very different views and encoded in various ways, from aversion, to apprehension, to amazement.

Foreign documentation of early Hawaiian surfing focused on playful and sensual, even sinful, aspects of surfriding (riding waves) and surfing (riding waves on a board). The drawing below (figure 3) is an early attempt to decode and illustrate Hawaiian surfing, which was sketched in 1851 by a missionary, Henry T. Cheever (DeLaVega 2011, 17). However, this illustration is inaccurate—surfers ride the face of a wave, not the back. Thus, this attempt to codify surfing reflects colonial perceptions, rather than the practice itself. That said, this drawing adequately depicts surfing as a communal practice, performed by men and women alike.

Another foreign encoding of surfing includes one of the first written accounts by Captain Cook on his third voyage to Hawaii in 1779. He wrote about the competence needed for surfing,

As the surf consists of a number of waves of which every third is remarked to be always much larger than the others, and to flow higher on the shore. . .their first object is to place themselves on the summit of the largest surge, by which they are driven along with amazing speed toward the shore. (Cook 1784, 145–14)

Shortly after Hawaii was discovered by Cook, Christian missionaries wrote descriptive accounts of the practice of surfing, which emphasized "heathen" natives and promoted surfing as "sinful."

Melville (1849) was one of the first authors to incorporate surfing into Western fiction. According to Moser (2008, 101), Melville "removes surfriding from a missionary context and begins a long tradition of popular writing that casts surfriding into plots of adventure and romance for Western audiences." In 1866, Mark Twain documents his attempt to surf and explains, "None but natives ever master the art of surf-bathing thoroughly" (Moser 2008, 177). Around the same time, three Hawaiian princes were seen surfing along the shores of Santa Cruz, California, drawing attention to surfing from a different, non-native crowd. Although some foreigners began to associate surfing with positive meanings, bordering at times on reverence, codification of the competence required additional support and linkages between materials, competences, and meanings, which would ultimately support imitation of the practice.





Adaptation. The eventual reproduction of surfing beyond Hawaiian culture required adaptation of the practice within foreign systems of practices. To Hawaiians, natural elements such as the ocean, waves, and trees (materials) were blessings, and making a surfboard was equally as important to surfing as riding a wave (competences). The diffusion of surfing began during the 18th century not by the exportation of surfing itself, but through explorers and missionaries who visited the Hawaiian Islands and reframed the elements of the practice through their Western sociocultural lens. Adaptation of surfing into Western culture involved transposition of surfing materials and codification of surfing competences, of how to ride a wave as well as alignment between original and new meanings. Transposition and codification allowed for the adaptation and emergence of surfing across sociocultural contexts.

Adaptation of surfing resulted in the first organized surfing exchange transaction between locals and foreigners in 1897 by a group of Hawaiians called *Hui Pakaka Nalu* (Clark 2011). The opportunity for monetary exchange emerged to meet the demands of increasing visitors along the shores of Waikiki, by offering canoe-surfriding rides

for \$1/hour. According to Clark (2011, 71–2), "[t]he presence of commercial canoe surfing in Waikiki in the 1890s not only supported the visitor industry, but undoubtedly helped to stimulate the revival of board surfing then and in the next decade, the early 1900s." As foreigners became more familiar and fascinated with surfing, they eventually learned to surf on surfboards and the demand for surfboards grew.

The adaptation of surfing is also evident toward the end of this epoch in the establishment of formal surfing clubs, such as Alexander Hume Ford's *Outrigger Canoe Club* (OCC). This juncture highlights a power shift, as elite Westerners began to invest in and promote the practice of surfing. This club shifted the relationship between original carriers of the practice (Hawaiians) and noncarriers who wanted to learn surf (Westerners) and altered the way the practice was organized (Schatzki 2019). The OCC was formed in 1908 but remains an important part of surfing in Hawaii today. Figure 4 is a picture taken in 1908 (DeLaVega 2011, 45).

Ford developed this Club as a "place where surfboards may be revived and those who live away from the

waterfront may keep their surfboards to make Waikiki always the House of the Surfers" (DeLaVega 2011, 45, quoting a letter sent out to the community promoting OCC at the time). In 1935, Tom Blake described the OCC as "the center of surfriding in Waikiki."

Practice Reproduction. Historical data reveal that carriers of the practice of surfing became dominated by foreign noncarriers (i.e., missionaries) through colonialization of the Hawaiian Islands (Arvin 2019). This shift in power repressed the reproduction of the surfing until alternative systems of practice of other Western noncarriers (i.e., explorers, writers, and entrepreneurs) allowed for alignment of meaning, and reproduction of the practice of surfing beyond its original sociocultural context. In this epoch, dominant forms of practice reproduction shifted from demarcation to imitation.

The power shift that sparked the diffusion of surfing out of its original context altered indigenous systems of practices by introducing new practices and sources of social power. Our data reveal that the demarcation of surfing did not require the removal and transport of the practice "out" of a cultural context. Rather, we find that a practice can be demarcated by delineating boarders around a practice and encountering changes in its original cultural context. One of the main sources of discontent for foreigners was the lack of devotion Hawaiian natives had to Western religion. The missionaries and explorers disregarded local religious practices of worshiping multiple gods and considered surfing to be a sinful act. Echoing prior research on crossnational diffusion (Kaufman and Patterson 2005), our findings reveal surfing was transposed and codified by Westerners who did not appreciate the skills required to ride waves nor the spiritual aspect of surfing and, thus, early diffusion suffered (Rogers 2003).

Dominant foreign perceptions of surfing shifted toward the end of this phase, from condemnation to admiration, and imitation began to occur. Although missionaries sought to turn Hawaiians away from "sinful" activities, such as surfing, other visitors saw surfing as exotic and adventurous. Their enthusiastic encoding of the practice eventually enticed others to visit the Islands. Toward the mid-late 1800s, foreigners were increasingly exposed to surfing and dominant Western meanings transitioned from surfing as sinful to thrilling. Surfing even began to align with systems of practices tied to Western religion. In 1851, Rev. Henry Cheever wrote, "For my part, I should like nothing better, if I could do it, then to get balanced on a board just before a great rushing wave..." (DeLaVega 2004, 14). Eventually, surfing communities emerged outside Hawaii as visitors increasingly became practice carriers (Buckley 2002). Imitation of surfing reflects a power shift between indigenous surfers (carriers) and foreign nonsurfers (noncarriers), and transition in dominant forms of practice reproduction from demarcation to imitation. This

epoch illuminates how colonial practice systems emanating from, and imposed by, foreign noncarriers, hindered transposition and codification of surfing elements, which first limited the adoption of an artifact, but then sparked adaptation of a practice.

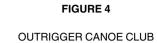
Epoch Two: Early-Mid 20th Century

Practice Emergence. While Hawaiians surfed long before Western colonialization occurred, they did not have formal clubs until several years after the OCC was established. Signaling continued Western influence on surfing, the practice (re)emergence of surfing featured a practitioner base skewing heavily white male (Finney and Houston 1996, 71). Although the OCC receives credit for surfing's revival, a second "club" Hui Nalu, or "Club of the Waves," was loosely founded in 1905 and formalized in 1911. Hawaiian surfers (also mostly male), imitating the Western club organization, followed suit and formalized surfing as a distinct practice. According to surfing historian, DeLaVega (2011, 54), "The Hui Nalu was composed of nearly all Hawai'ians or part-Hawai'ians and, as such, most of the early beachboys." The two clubs were rivals. Most Hawaiians joined *Hui Nalu* because of the prejudice they perceived by members of the OCC.

The demand for learning to surf emerged in the late 1800s but it was not until the mid-1900s that surfing spread widely as elements of the practice were transported off of the shores of Waikiki to coastal areas on neighboring continents, particularly the United States and Australia (Booth 2001; Kampion 2003; Warshaw 2005). As surfing grew in popularity, additional resources, services, and instruction were offered to accommodate the amplified interest; meanings associated with materials and competences changed. In his interview with Maureen Cavanaugh, Jim Kempton, President of the *Surf California Museum*, discusses the pioneering years of surfing as a market, or what has been called the "Golden Era,"

... anytime you have the pioneering age, everything is being discovered and ... everything was being invented at that time. ... surfboard design was being invented and surf clothing was being invented, surf culture in general... language that we used to describe the things that were being done that had never been done before... the whole culture of surfing developed during that era and... people's fascination about the sport and the lifestyle. (KPBS, September 30, 2009)

Surfing has deep cultural roots as an ancient indigenous practice, but the scaffolding of a modern subculture of consumption for surfing was largely constructed during the early-mid 1900s. Booth (2001, 91) suggests, "California was the birthplace of modern surfing culture." This epoch represents a major acceleration in surfing diffusion.





As surfing grew and spread, it transformed from a wayof-life in Hawaii, to a counterculture, a distinct lifestyle found along the shores of California and other coastal areas. However, it remained illegitimate with regard to notions of productivity. Many capitalized on the beachboy or beach- or surf- "bum" lifestyle, and most of the dominant images of surfing in the mid-1900s (e.g., Gidget and Beach Blanket Bingo) portrayed surfers as lazy people (predominantly male) who cared only about surfing all day and partying all night. Surfers began justifying their lifestyles and trying to prove that being a surfer and being "productive" were not mutually exclusive. Competition across different groups of surfers grew and the development of surfing as a sport and market paved the way for a bigger shift in power among old/new carriers and noncarriers of the practice. Adaptation of surfing involved transitions from a counterculture, to a growing popular culture with new materials, meanings, and competences.

Transposition. During this epoch, visitors to Hawaii increased, and the popularity of surfing grew. Surfing materials moved out of Hawaii via traveling surfers, especially from California (Booth 2001). Increased demand and the need for transportable boards altered practice materiality. Surfboards that were traditionally crafted by hand and

given their own names changed. The practice of crafting heavy wood into boards by hand was replaced with different competences and materials. This era reveals a transition from solid wooden boards to lighter, more buoyant boards, made with hollowed-out wood, and later foam. This introduction of new materials fueled the movement of surf-boards. Surfboards become easier to make and transport.

In 1924, one early innovator of surfboards, Tom Blake, traveled to Hawaii and developed a "hollow board," which was lighter and faster wooden board than those the Hawaiians had been riding for centuries. According to Drew Kampion, former editor of *Surfer Magazine*,

Lighter, more buoyant, and easier to maneuver, Blake's hollow board also made surfing accessible to greater numbers ... Manufactured first by Thomas N. Rogers Company of Venice, California, and later by the Los Angeles Latter Company, this was the first "production" surfboard in the world. (2003, 43)

Blake's hollow boards reflect material advancement and increased the efficiency by which surfboards are made and distributed. However, it is the introduction of foam and resin materials that made the most substantial improvement in efficient production and distribution.

In 1958, California surfers and surfboard shapers, Hobie Alter and Gordon Clark opened a foam surfboard shop. By the 1960s, most surfboards were made of foam. Foam boards were cheaper, lighter, and easier to maneuver; traditional wooden boards became rare. According to surfing historian Clark (2011, 28), "The huge demand for foam boards led to the first retail surf shops in Hawaii." He talks about the importance of this transition to developing a surf market:

[Surfing] went from all of these heavy wood boards and even the hollows were heavier and ... not maneuverable ... but as soon as foam came onto the scene and they worked out the foam fiberglass ... about early "50s mid-1950s, that's where the commercial boom ... takes off. And that's where you got guys like Hobie and Velzy and Dave Sweed, ... all these California guys, they start commercializing the manufacturing of surfboards, they set up the factories, they set up the assembly lines, they're just like the Henry Fords of the surfing world ... Ford did the same thing with automobiles, the assembly line, just crankin" um out. And to me, that's where the explosion is right there, it's right at that transition (John).

As Clark mentions, shortly after foam boards entered the scene, Alter and his friend Dick Metz, a California surfer who cofounded the *Surfing Heritage Foundation*, moved to Hawaii and opened one of the first surfboard shops. In an interview for the film, *Paving the Wave*, Dick Metz recalls,

We flew to Honolulu and opened really what was later to become the first retail surfboard store where they weren't made in that store. Up until then there were shops but it was all where Velzy or Hobie had made in the shop and sold themselves. This was the first retail outlet where you just had finished surfboards and all you sold were surfboards and a little resin and fiberglass ... there were no clothes in those days. (Uploaded on YouTube by Surfheritage, March 24, 2011)

Surfboard stores reflect another transposition in surfing: what was once handcrafted and shared by families could be purchased in a store. Meanings and accessibility of surfboards changed.

Codification. Most Hawaiian surfers involved in the early diffusion or spread of surfing never thought of their efforts as "working." These "beachboys" were paid to help others learn to surf but it was often difficult to tell who was more entertained—the beachboys or the tourists.

Beachboys often made no great distinction between work and free time...Surfing was as important to these barefoot troubadours as their sexed-up, easygoing, empty pocket deviancy. By combining the two, beachboys laid a foundation for what would later be called the surfing lifestyle (Warshaw 2010, 53).

The Waikiki Beachboys became the quintessential embodiment of surfing culture. Although many beachboys would never dream of leaving the shores of Waikiki, Duke Kahanamoku traveled the world, performing surfing exhibitions. After Kahanamoku won three Olympic gold medals as a swimmer, he focused on promoting surfing and Hawaii tourism. Kahanamoku is recognized as an "Ambassador of Aloha" and fondly remembered as the "Father of Modern Surfing" (Crowe 2007). The beachboys, and Kahanamoku in particular, supported codification of surfing by demonstrating the practice and teaching others how to surf. Another way surfing was more formally codified and moved across broader audiences was through contests.

The number of surf clubs grew throughout the first half of the 20th century and established fertile ground for developing surfing as a competitive sport. Local competitions among surf clubs further codified the sport, establishing contest rules and guidelines. In the 1950s, international competitions drew surfers from different countries to compete for recognition, and eventually money. The first international competition, Makaha International Surfing Championships, was held in Hawaii in 1952 and became a model for surfing competitions. In 1956, the Summer Olympics were held in Melbourne, Australia. Although surfing was not included in the games that year, an International Surf Carnival brought surfers from around the world to Australia. International surf competitions increased awareness of the sport and surfers became increasingly recognized as athletes instead of "beach bums." World-renowned competitive surfer, Corky describes his early teenage ambition in 1963,

Hobie [Alter] was the biggest and most respected surfboard builder in the world. Mickey [Munoz—a surf pioneer and famous surfboard shaper] talked to my parents and convinced them, and me, that being under the Hobie umbrella would mean huge benefits to my surfing career... It's kinda funny looking back at that now. There was no such thing as a professional surfer then but none the less I was positive that I was gonna be one.

In fact, Carroll is widely recognized as the first professional surfer, winning the first competition purse in 1964 when he was 16 and becoming the first surfer with paid endorsements. Professionalization of the sport further formalized competences (how to surf). Influenced by new board technologies and lucrative surf competitions garnering mainstream press, surfers rode waves and boards differently. The lighter, faster boards, and the addition of the fin, facilitated the dispersion of the practice across multiple continents and increased commercial avenues.

Adaptation. Retail stores helped to make connections between materials, competences, and meanings and drove the adaptation of surfing as it transitioned from a Hawaii-

based, counterculture practice, to a thriving sport and consumer culture across a growing number of beach and coastal areas. Surf logos started as a means for surfboard makers (shapers) to identify and brand their surfboards. As surfboard stores developed into extended retail stores, they were populated with T-shirts that depicted the surf shop's logo. The screen-print surf logo t-shirt became an iconic piece of surfwear and a major fashion trend, even for non-surfers, especially within the era's growing youth culture. Surfing historian, Warshaw (2010, 174) states

by 1962, every surfshop in the land had at least one garment rack holding a neat row of bright white, all cotton, no-pocket, \$1.99 plus tax T-shirts, sizes S to XL, each with a two-color company logo screened large across the back. Like trunks [surfing shorts], T-shirts were another way to claim wave-riding status in public, and a surfer wore the T-shirt of his favorite board maker with the casual pride of a varsity ballplayer wearing a letterman jacket.

Although clothing and accessories now dominate the surf industry, Duke Boyd, cofounder of the iconic clothing line *Hang Ten*, explains the effort to sell his brand in surf shops in 1950s–1960s,

The surf shops were sort of like the nut to crack because they really didn't have any sense of that type of thing. They only made surfboards and they didn't even have wax at the time...So it was really no one in the surfing business had any idea how to merchandise anything else besides surfboards. (Interview with Maureen Cavanaugh, KPBS, September 30, 2009)

To promote the sale of *Hang Ten* in surfboard shops, Boyd was one of the first clothing companies to advertise in the *Surfer Magazine*, which was first published in 1960 by John Severson, a surfer and photographer from California. Retail stores and advertising led to an influx of new materials such as the fin (Tom Blake), wetsuit (Jack O'Neill), and boardshorts (Duke Boyd) and integrated surfing within broader systems of practices, such as beach and youth culture. This epoch opened doors to become a practice carrier for those who connected with the lifestyle of surfing but did not or could not gain the skills or access resources to surf themselves.

During this time, surfers confronted negative "beach bum" perceptions of the sport, particularly from noncarriers. According to former *Surfer* editor Drew Kampion (2003, 80), at the launch of the magazine, "*Surfer* wanted the public to see a kinder, gentler side of surfing...It was just a good, clean, healthy sport." Likewise, the film *Endless Summer* purposely portrayed surfers in a positive light. Dick Metz discusses how this film changed perceptions of surfers,

Hobie [Alter] was instrumental in suggesting to Bruce [Brown] that the surfing image was so poor at that

time...Bruce left the Los Angeles LAX in a coat and tie and Mike Hensen and Robert August were in blue blazers and all buffed out and that whole movie was made with the thought of upgrading the image of surfing ... from the east coast and the Midwest then saw surfers in a different light and I think that was the beginning of changing the whole culture and image of surfing. (Interview with Eric Jordan, Paving the Wave)

Surfing was adapted during this time as practice elements traveled across national borders and were integrated into other systems of practices, embedded in both contests and markets.

Practice Reproduction. In this epoch, we find that the adaptation of surfing allowed for practice reproduction beyond imitation. It led to the acculturation of surfing as intertwined with beach and youth cultures worldwide. Although surfing is rooted in ancient Hawaiian and Polynesian culture, much of what is recognized as modernday surfing was developed during the first half of the 20th century through movies, magazines, and the movement of the practice to other coastal areas. The origin of modern surfing is important because the reproduction of surfing over time and across diverse sociocultural contexts contributed to distinct systems of practices that support a "surfing lifestyle" today. The original Hawaiian culture provided a fertile seed for surfing to become an elite competitive sport and lifestyle world-wide. Warshaw (2010, 80) discusses how surfing was first reproduced in California through imitation,

It was probably the sport's communal high point... A particular surfer look took shape, borrowing heavily from Hawaii. A palm-frond hut was built in front of the San Onofre parking lot... anyone who played guitar bought a ukulele and learned... "My Little Grass Shack" and half dozen other Waikiki beachboy standards. "Hawaii to us was like what heaven is for religious people," one of San Onofre's original surfers recalled. Nobody had actually been, but we all hoped we'd get there sometime and the next best thing was to sing.

By the 1930s/1940s, surfing in California resembled many of the communal aspects of Hawaiian culture. Shortly thereafter, "Californian surfing culture rapidly diffused around the pacific rim, initially on the back of Hollywood genre of beach movies" (Booth 2001, 91).

During this time, a growing number of noncarriers of the practice became intrigued by surfing. World War II began and ended, prompting many American soldiers to look for activities that provided enhanced excitement. In 1959, Hawaii became the 50th U.S. state. Duke Kahanamoku's travels inspired global awareness of surfing and Hawaii. Furthermore, efforts to improve access to surfing, as well as the surfing scene, led to transposed material representations (e.g., movies) of surfing into broad social structures, building up surfing as a market and a subculture of

consumption. Surfers began to realize many waves around the world were being "wasted" or going un-surfed and began traveling to coastal areas in search of the perfect wave and documenting this experience through film. They also became cultural entrepreneurs (Maller and Strengers 2013) and promoted surfing as a serious sport and desirable lifestyle. Ironically, Westerners, who once restricted its performance, fueled the diffusion of surfing.

Early movement of practice elements and the growth of a market for surfing allowed for the integration of surfing among a variety of coastal areas. The emergence of retail spaces helped to adapt the practice of surfing and made surfboards, as well as surf accessories and clothing, more accessible. Surfing began as a counterculture movement at the beginning of the 20th century but transformed into a cornerstone of popular, coastal culture by the middle of the same century. In many places, surfing was acculturated into "beach culture" and was a symbol of a lifestyle and competitive sport. This epoch reflects another shift in power between practice carriers and noncarriers as the diffusion was driven by acculturation, and surfing became increasingly legitimized. Importantly, this adaptation allowed for nonsurfers to become carriers of the surfing practice as materials, competences, and meanings aligned with commercial systems of practices. This era reflects the non-Hawaiian practice carriers contributing to a steep increase in the movement of variety of surfing-related products, ideas, and services. It also provides added insight into the systemic acceleration of practice adaptation, beyond a particular social structure, as surfing grew rapidly within and across diverse cultures and nations.

Epoch Three: Mid-20th—21st Centuries

Practice Emergence. This epoch begins with what is recognized as one of the last major transitions in surfing culture, the "shortboard revolution." This "revolution" started circa 1967 and reflects a shift, not only in the materials and competences associated with surfing but also results in a major change in the practice (understandings, doings, and sayings) of surfing, as well as practice spinoffs. In this epoch, surfing is recognized as a practice, sport, and legitimate market, evidenced by the demand for material artifacts, (surfboards, clothing, and accessories), and codified by the growing number of contests and retailers around the world. The movement of practice elements, and emergence of surfing across various crossnational contexts, led to a number of changes in surfing including a significant change from riding the "nose" of a surfboard to riding the "curl" of a wave, invention of shorter and lighter boards, introduction of hybrid practices (e.g., skateboarding and snowboarding), automation and offshore outsourcing of surfboard production, development of an artificial wave, and expansion of professional and competitive surfing.

By this time, surfing spread around the world through people, films, music, pictures, and stores, fueled by a growing segment of youth (Warshaw 2005). The relations among practice carriers and noncarriers shifted again as surfing took on new meanings of freedom, peace, and escape, as well as harmony, equality, and hope—ironically set within a decidedly male-dominated sport. In the mid-1960s, surfing was becoming an enduring subculture of consumption, supported by a growing market that offered products and services for carriers of the practice who surfed and those who aspired to live a surfing lifestyle. When he won the Surfer Lifetime Achievement Award in 2011. Jim Severson, founder of Surfer, described, "In the middle of my tenure with Surfer, mid-60s, the whole world was changing. It was war and peace, and love and protest and social awareness and social consciousness." Surfing was entangled in that world.

Our final and ongoing epoch marks a transition in surfing that sparked varying forms of innovation. In addition to the shortboard revolution, acceleration of practice diffusion across cultures and nations have led to many alterations in the practice, including boogie boarding, tow-in surfing, skateboarding, snowboarding, and stand-up paddle boarding, to name a few, and the meanings of surfing take on new light as new carriers engage, and surfing emerges in places like Bangladesh. Following an era where carriers of the practice increased exponentially, we find that diffusion breeds innovation and vice versa. Epoch 3 reveals a power shift that democratizes surfing through the movement of meaning, materials, and competences, making surfing more gender inclusive and increasingly available to others, from autistic children and troubled youth, to inland surfers, to people who live in impoverished areas where surfing contradicts the norm.

Transposition. During this phase, transposition of surfing involves continued movement of materials across different nations and coastal areas, as well as inland due to new technology and a growing boardsport (e.g., snow/skateboarding) culture. Differences across the natural, sociocultural, and technological environments have led to changes in the equipment needed (e.g., wetsuits for cold water) and revolutionary alterations to surfboards and how they are made.

Australians are recognized for reinventing surfing during this epoch by designing shorter and faster boards, specifically engineered to maneuver across a wave and get as close as possible to, or ideally inside, the "curl" or "barrel." Once other surfers saw what could be done on a wave they began making their own versions of the "shortboard." According to Marcus (2007, 150),

...the future of shorter surfboards fell into the hands of two men on opposite sides of the Pacific: In this corner, shaping for the Americans, was Dick Brewer; on the other corner of the Big Water, Bob McTavish...Over the next few years, these two sides would meet in swift collision all around the world, and that clash would forge the modern shortboard.

Further, a renowned surfboard shaper explains:

It was a real tumultuous time in surfing and actually in life because the shortboard revolution started in '67, but '65 and '66 was really a crazy time in the world. There was Vietnam, and a lot of anti-war and anti-Vietnam sentiment going on in college campuses and in the United States. And music was really changing. Really revolutionary time of life and when the shortboard thing came along; just coincided with what was going on in the world and the consciousness of the youth at the time. So it was really ripe for surfing to change the equipment at that time. And it was a really, very exciting time period in surfing. That would be one of the major points of change in surfing, in '67, '68 when the boards just switched from longboards to shortboards and within a year the surfshops couldn't get rid of longboards 'cause nobody wanted to buy them. (Dennis)

Here, we see reinventing of the surfboard coincided with major changes in American culture.

Beyond changes in shape and size, board production materials and machines changed dramatically. Dennis discusses these production innovations as the "demise of the surf industry,"

It started about '96, '97, that computer cutting thing, CAD [computer-aided design] program deal, that was one of the things that was the downfall of the surf industry. Because now you got simple economics, you got supply exceeding demand. Prior to that was hand-shaping, surfing was a big fad, you couldn't meet the demand so they needed guys because you couldn't make them fast enough by hand. Which was a good thing because that kept the prices high and kept people wanting boards and uh, there wasn't an abundance of supply, supply didn't exceed the demand. The balance was in favor of the manufacturer. That was the one thing, the demise of the surf industry.

Surfers went from buying handcrafted surfboards from small, independent companies or shapers, to buying mass-produced boards. Ironically, computer software, something that should help make a surfboard shaper's work easier, and something Dennis relies on in his shaping, enabled movement of surfboards into places where people did not surf. Rizzo (2010) captures the complexity of the relationship between manufacturing and use of material artifacts:

Somewhere in California, Florida or Hawaii someone is painstakingly sculpting a block of polyurethane foam into one of the most unique products the United States has ever produced: a surfboard. Using knowledge handed down from "shapers" and surfers over hundreds of years, the craftsman sands here and there along the blank until, eventually, it takes shape as a one-of-a-kind product. Each surfboard takes about 16 days to go from blank to finished product, including shaping, fiberglassing, sanding and painting. The

eventual cost at a surfshop for all that craftsmanship is \$400-\$600, on average.... On the other side of the globe dozens of workers, many of whom were raised on farms and may have never seen the sea, are engaged in the same activity—almost. Trained by shapers from Australia and the United States, these Asian workers produce dozens of boards a day for \$2.50 an hour plus lodging in a crowded dormitory. Many of them have no idea what a surfboard is used for; it's just another toy bound for Western markets and for people who have the time and standard of living to afford a hobby. (MSNBC.com, August 5, 2010)

During this era, new technologies and outsourcing of manufacturing changed the footprint of surfing culture. The power shift that underpins this epoch highlights the influence of carriers who understand and promote the surfing industry, not just those who do or do not surf. Carriers of the practice continue to grow in numbers, beyond those who perform the practice by surfing and include those who engage with and perform the practice through the market (e.g., working in a surfshop, buying, and/or wearing surf brands). Transposition of surfing is evident in boardmaking (see above), but it is interesting to note the meaning of the artifact (surfboard) does not always transfer in the same way in cross-national contexts. In the passage above, we see that makers of surfboards, who were once integral carriers of the surfing practice, may not always be carriers of surfing now. This is because the material artifact (surfboard) they are making misaligns with the meanings embedded within their systems of practices. To these shapers, a board has no meaning attached to the practice of surfing; only meaning to the market in which it is made and sold. The use of machines and automation of manufacturing drastically impacts meanings of material artifacts being made in one place and culture and used in another.

Further, technology has also impacted where surfers can find waves. A joint effort by Kelly Slater (11-time world champion surfer) and the World Surf League (WSL) created an artificial wave that is changing access to surfing. According to Fred Hemmings (former pro-surfer and founder of the Triple Crown of Surfing),

Slater's wave is classic. I like to say that on most any day the best waves are in a farm field of Fresno, CA. In the short amount of time since Kelly Slater's wave pool opening other surfing entrepreneurs have produced many variations of wave generation.

While some find the migration of waves inland great for surfing, others believe artificial wave repetition diminishes the relationship between surfers and nature (Finnegan 2018).

Codification. Changes to surfing equipment led to major changes in the competences needed to surf, which created conflict among original surfers and those newer to the

surf scene. In 1967, John Witzig, an Australian surf journalist, wrote an article in *Surfer Magazine* titled "We're Tops Now." According to surf historian, Tim DeLaVega, this article marked the "last major change in surfing history," the "shortboard revolution." Witzig proclaimed,

"[i]t appears to me that a largely false set of values has been created in California surfing" and "[t]hose of us who were conversant with the present trend of surfing in Australia were astonished at the corresponding lack of development in this direction in the United States. Probably nothing has had such a profound influence in leading California out on a limb than has the nose riding fixation." (Moser 2008, 192)

Witzig referenced how Australian surfers reinvented surfing, and how American surfers and media were essentially ignoring the new and "improved" way of riding waves. This reflects tensions in cross-national diffusion that limit particular forms of practice reproduction, especially innovation. Witzig describes how American contests codified surfing to prevent innovation:

A contest system should work to draw from the competing surfers their best. When the surfers have to work for, to surf for the system, then the system has defeated its purpose. The Huntington contest is a prime example of a restricted wave contest. Through Australian eyes, this was the most tedious and uninteresting contest that I have ever seen. Even the stupidity of the mass public enthusiasm for nose work did little to arouse interest. The surfers, restricted and confined to the system, did not attempt anything which would constitute chance. Indeed they could not. (Moser 2008, 192)

The Witzig article was monumental in codifying new ways of surfing because it was the first article to publicly recognize the presence of newer, shorter surfboards and encode its related style of surfing by a major American surf media outlet. From 1966 to 1967, surfboard manufacturers and retailers threatened to withhold advertising dollars to pressure editors not to publish any articles or photos of the shorter boards because they needed to sell off their existing inventory of longboards (John). Once this new form of surfing began gaining attention from broader surfing audiences, longboards, and nose riding quickly became a thing of the past.

Prior to the introduction of the shortboard, few people had knowledge and skills to make or shape surfboards. As interest in surfing grew and more people engaged in the practice, the number of people replicating surfboards and other surf-related resources (equipment, clothing, etc.) increased the size of the market and fueled diffusion of the practice. Dennis recalled learning from Gerry Lopez, a world-renowned shaper from Hawaii, and from others taught by Dick Brewer:

...all the hot shortboarders from Hawaii used to get Brewer's [boards] because he started the whole thing. So at the time when he was on Maui and when he was working at Surfline, Gerry [Lopez] used to watch him shape. Gerry was living in Niu Valley a couple blocks away from me and he would shape surfboards in his garage at his parents' house and I used to watch him shape boards in his garage using a jack plane...that's how we started, he started shaping and then he was glassing them there...we started stripping boards, stripping longboards, started, you know, he gave me some templates and I just started shaping and glassing them myself. For my friends, just for fun...And then go ride um, you know and us, they were the ugliest thing you've ever seen but, we didn't know, and we knew they were ugly but we didn't care, we were just kids having fun.

In addition to describing how the making of surfboard was codified, this passage reflects the informal and organic way in which many surfers in the industry started in their respective professions. One of the central ways surfing was codified and diffused across other social structures, is through surf-related professions, such as shaping, but especially the development of the professional surfer. Surfers can now make millions of dollars a year in sponsorships and prize money. Although contests and surf gambling date back to ancient Hawaiian culture, the growing number of competitions and expansion of professional surfing—the ability for people to make a living by surfing—began with the development of surfing into a professional sport.

The effort to develop surfing as a profession was led by former pro-surfer Fred Hemmings. In 1968, Fred was recognized as the "first modern-day Hawaiian surfer" to win the Surfing World Championships. After his win, Fred opted to stop surfing competitively to focus on developing it as a professional sport. Fred describes his efforts to launch surfing as a sport:

I started in 1971 the first Pipeline masters and in 1976 surfing was catching on professionally around the world. There were enough events so that in 1976, along with Randy Rarick who was just starting out to be my contest director, we started the first world circuit, and then in the '80s we had events all through television networks and I started the Triple Crown. So that's the evolution of that. And then of course, it took off since then.

Surfing is now a legitimate sport. The WSL is the organization that runs surfing's World Tour for men and women. In 2012, WSL (formerly known as Association of Surfing Professionals) began regularly testing its athletes for drug use to elevate professional surfing standards to meet those of other international sports, as outlined by the World Anti-Doping Agency. This reflects the shift from surfing as a counterculture, anti-establishment, and rebellious activity, to a subculture of consumption, to a legitimate, more gender inclusive, international sport. Moreover, after over 20 years of lobbying led by an Argentinian surfer, Fernando Aguerre, president of the International Surfing Association (ISA) and a major surf-brand entrepreneur,

surfing was finally proposed by an organizing committee as an Olympic sport. The recent invitation for surfing to enter the 2020 Tokyo games reflects how the diffusion of surfing has enabled the practice to become a global market and the professional and elite sport it is today.

Adaptation. Over time, surfing transitioned from a regional, relatively homogenous practice to a global, multifaceted practice constituted by a plethora of materials, competences, and meanings. The movement of practice elements continues to have a significant impact on the practice of surfing. The "shortboard revolution" reveals the outcomes of such movement across drastically diverse and changing sociocultural contexts. Increasing mobility of materials and access to the practice reflects a shift, not only in how surfing is enacted but also those who carry (or do not) the practice. This era highlights shifts in power primarily between old and new carriers, but also draws attention to other noncarriers of surfing and their distinct systems of practices. Those who do not fit stylized images of the 1950s in California are surfing more and more. These new carriers adapt and expand the practice reach in meaningful ways.

For example, Tom Bauer, founder of the humanitarian organization, *Surfing the Nations* (STN), that helped Jafar, from our opening quote, access surfing materials, has a mission to "go to all the surfable nations and to introduce surfing into the culture for the purpose of showing the good side of surfing." In an interview, Tom discusses how surfing is influencing cultural norms in Muslim countries because "basically they don't go out, you know past the break...[because] the water has been taboo, now we're breaking the taboo." As surfing becomes aligned with meanings, competences, and materials embedded in crosscultural systems of practices, noncarriers can become carriers of surfing. However, when major misalignment among elements remain (e.g., shapers in foreign production facilities) a practice does not reproduce in that space.

The adaptation of surfing across cultural and national contexts influenced the development of additional integrative practices (e.g., skate/snowboarding), but those novel practices feed into macro-level structures, such as boardsports, and micro-level actions, such as skateboarding, and contribute back to changes in surfing. The shortboard revolution that led to practice (re)emergence in the late 1960s involves some of the most influential representations that are central to surfing today. John Clark, surfing historian, recalls how a number of practices emerged alongside surfing, and how surfing influenced and was influenced by the concurrent development of these practices, "Surfers [were] skateboarding, skaters [were] surfing. Surfers [were] snowboarding, snowboarders [were] surfing. So all this stuff [was] running parallel and as it's being commercialized it's pulling surfing with it. It's all supporting surfing." He

comments on how these related practices contribute to the popularity of "ariel" surfing:

The stuff guys are doing on surfboards now is phenomenal, it's amazing! They're doing the gymnastics on surfboards that we only used to imagine when we were kids. I mean we're out there riding a 10' foam board just trying to do a floater [on top of the wave] and these guys are catching airs and doing aerial maneuvers, it's insane. So that's how I see the progression and I just see shortboards flowing out of all that stuff that's running parallel to surfing.

In this epoch, the spread of surfing is powered by growing media sources, such as surf videos and channels, televised competitions, magazines, blogs, and social media. The adaptation of surfing across other cultures requires a level of commonality, but also reflects how surfing carriers extended from a relatively homogenous group of "surfers" to a diverse cross-cultural and cross-national community as surfing continues to emerge in places like Bangladesh.

Practice Reproduction. This shift from a practice acculturation to practice innovation continues to move surfing beyond a subculture of consumption (Schouten and McAlexander 1995) to a world-wide popular culture, competitive sport, and mass market. It has branched out to create an extended industry of boardsports (surfing, snowboarding, and skateboarding). Furthermore, it draws attention to how changes in elements of a practice can increase efficient equipment production and market reach. It is through the increase of access, affordability of surfing, and growth of interest in the sport that the surfing subculture of consumption could attract many of the practice carriers it has today.

Where, how, and why surfing is practiced has drastically evolved. Surfers of all genders, races, and economic backgrounds can be found in extremely populated and remote places. Although it is evident that surfing is reproduced across diverse sociocultural contexts through innovation, other forms of reproduction fuel the diffusion of surfing as well. Surfing is now spreading among those who may not have been considered as potential carriers of the practice. Even in a country like Bangladesh, where national systems of practices are misaligned with the elements of surfing, girls (and boys) can be found surfing along the shores (Clark 2017).

This epoch draws attention to the nested and dynamic nature of systems of practices and how power variance can increase as a practice becomes diffused. What started as Western colonial influence to suppress the practice of surfing in Hawaii, shifted to the spread of surfing through the efforts of surfing entrepreneurs, who have been predominantly Western males. We see another shift that increases access to surfing across diverse groups of people, from those who perform the act of surfing to those who participate in the subculture of consumption that frames surfing.

This aligns with Kaufman and Paterson's (2005) findings that cross-national and cross-cultural diffusion are influenced by two key factors: (1) those in power choosing to invite or prevent people engaging in a practice in a particular way (e.g., noseriding) and (2) popularization of the sport by cultural entrepreneurs (e.g., brands, retailers, and contests). This phase suggests, however, in considering the rate of adoption in consumer diffusion, the tail end of an Scurve (Rogers 2003) can actually represent the restart of another innovation trajectory. Through the exploration of practice diffusion, we find that as a traditional product diffusion curve starts to decelerate or flatten (e.g., longboard), a new curve may be beginning (e.g., shortboard), enabling the continuation of a practice through innovation and ongoing practice reproduction.

DISCUSSION

Our findings contribute to prior consumer research on diffusion (Gatignon and Robertson 1985) by revealing a meso-level process of practice diffusion that centers on practice adaptation, rather than consumer adoption categories. Building on Arnould (1989) and Fisher and Price (1992), our extensive longitudinal examination of surfing allows us to identify the influence of social context on, and social process of, practice diffusion. Our multilevel analysis reveals a recursive practice diffusion process is fueled by movement of practice elements (materials, meanings, and competences) through processual linkages (transposition, codification, and adaptation). Importantly, we find that when a practice emerges across time and space its original cultural context may become masked, and its genealogy lost.

This study contributes to prior consumer research on practices (Warde 2005) by investigating the diffusion of an enduring practice across multiple cultural and national contexts, over an extended period. As figure 1 illustrates, the meso-level outcomes of practice diffusion result in multiple forms of practice reproduction—demarcation, imitation, acculturation, and innovation—that feed into microlevel actions and macro-level structures in various ways. The power shifts that delineate the three epochs we identify highlight the importance of macro-level structures that frame meso-level processes and the role of noncarriers in practice diffusion.

To elaborate the theoretical contributions of this practice diffusion process for consumer research on diffusion and practice, we further unpack the varied outcomes of practice reproduction. More specifically, we reveal underlying factors that enable, support, or propel power shifts that punctuate each epoch and influence the acceleration of practice diffusion (Vargo et al. 2020): strength of practice alignment and practice embeddedness. Strength of alignment is found among practice elements and with adjacent

practices (Schatzki 2019). Practice embeddedness is how deeply integrated a practice is both within and across multiple systems of practices. These dimensions shed light on patterns of practice reproduction that potentially underlie the trajectory of S-shaped (Rogers 2003) adoption curves (figure 5).

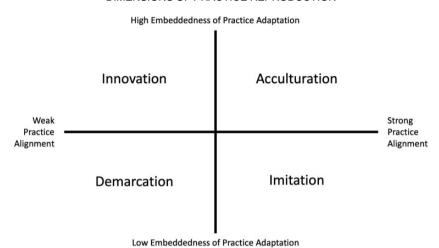
When there is weak alignment among elements of a practice and other adjacent practices and practice embeddedness is low, a practice is demarcated and marginalized by noncarriers (e.g., when Westerners began to engage with surfing). This outcome is evidenced by practice reproduction among cults, tribes, or small groups of people (Cova, Kozinets and Shankar 2007). Practice demarcation indicates shared understandings, doings, and sayings that are misaligned and often rejected by with broader social structures within which they are introduced. Practice imitation occurs when there is strong alignment between elements of a practice and the systems of practices within which it moves but the practice is not highly embedded within the wider structure and reproduction of a practice remains at a small scale. This outcome can be seen across subcultures of consumption, such as niche brand communities, like the Apple Newton and Harley Davidson (Muñiz and Schau 2005; Schouten and McAlexander 1995).

As practice embeddedness increases and practice alignment remains, acculturation with broader sociocultural contexts can occur. In our data, practice acculturation occurs through an increase in surfing embeddedness, due to the growth of youth and beach cultures, which accompany a shift from surfing as a counterculture to a mainstream market and competitive sport. Adaptation of all practice elements can be seen, from materials (e.g., boards, surf clothing), to competences (e.g., contest rules), to meanings (e.g., legitimation of surfing through movies, magazines, and music). This shift from practice demarcation to imitation to acculturation provides insights into the actions and interactions that scaffold curvilinear patterns of S-shaped adoption curves (Rogers 2003). These reproduction outcomes suggest that the reach and depth of diffusion (West 2018) change depending on practice alignment and practice embeddedness.

When practice elements do not strongly align with other practices, there is a possibility that they will die off (Thomas and Epp 2019). This could potentially be observed in a reduction in the rate of product adoption among consumers. However, in some cases, as practice embeddedness increases, adaptation can lead to reconciliation of practice misalignment in novel and unique ways, and *practice innovation* can occur. Practice innovation can be seen at a micro level, as an individual's enactment of a practice in new ways (Akaka and Schau 2019). However, as practices elements are aligned and embedded within systems of practices, broader outcomes of innovation can be seen at meso levels, such as formation of new markets (Vargo et

FIGURE 5

DIMENSIONS OF PRACTICE REPRODUCTION



al. 2020), and macro levels, such as evolution of national culture, or broad societal change.

Strength of Practice Alignment

Practice (mis)alignment is a critical consideration for the adaptation of a practice among individuals and within particular social structures, such as families (Phipps and Ozanne 2017; Thomas and Epp 2019). Although prior studies point toward adaptability as critical for habituation of a practice (Thomas and Epp 2019), they do not explicate how this process occurs. Our data reveal practice adaption is driven by processes of transposition and codification that serve as linkages among practice elements. Adaptation is influenced by the alignment among practice elements and other systems of practices (e.g., worshiping, dressing, or playing).

We find that practices emerge and are reproduced both within and across particular sociocultural contexts. Further, practice diffusion is influenced by noncarriers through pre-existing dominant systems of practices. The strong alignment between original surfing elements and beach cultures such as those found in California or Australia (Booth 2001; Warshaw 2005) allow for rapid practice imitation. We find surfing quickly reproduced through acculturation in some areas but was not necessarily assimilated with the wider culture (Peñaloza 1994). In other areas, practices are reproduced through demarcation because they compete with dominant systems of practices. For example, religious beliefs and perceptions about the ocean, as well as other socioeconomic barriers, led to demarcation of surfing in Bangladesh. Innovation is the dominant form of practice reproduction in the current surfing epoch, but in many areas surfing remains demarcated, limited in reach, and not accepted within the broader culture (Clark 2017).

Our exploration of practice diffusion across time and space provides a systems view of practice alignment and draws attention to how the (mis)alignment of original practice elements and other practices influences the way a practice is adapted as it emerges and re-emerges across cultural and national contexts. Rogers (2003, 181) asserts reinvention is "the degree to which an innovation is changed or modified by the user in the process of its adoption and implementation." This notion of reinvention recognizes that adaptation often leads to increased rates of adoption and highlights the need to understand alternative uses and modifications of ideas and how diffusion occurs through innovation. Our study underscores the importance of practice alignment with the systems of practices that frame diffusion processes (Arnould 1989) and the need to consider how materials, competences, and meanings that constitute a practice are integrated with other practices and systems of practices. Importantly, our data reveal specific linkages (Shove et al. 2012) that align practice elements with each other and other systems of practices. The strength of alignment influences how a practice is reproduced. We find that practice misalignment can lead to potential changes in meanings, materials, and competences that feed back into changes in the central elements of the practice itself.

Practice Embeddedness

Our historical analysis reveals the embeddedness (Granovetter 1985) of consumption in a wide array of common practices shape how people live out their daily lives.

It is important to note that surfing diffusion is rooted in systems of practices that were never fully abandoned. We show the original roots of a practice are critical for establishing a foundation from which the practice diffusion can occur. We assert that surfing was originally an ancient indigenous practice that eventually emerged across multiple sociocultural contexts and became embedded within a multitude of other systems of practices. We find multiple outcomes of practice reproduction; however, meanings, materials, and competences that existed in early time periods remained integral parts of surfing during the subsequent periods and continue to shape the systems of practices that embed the practice of surfing today. Although not everyone around the world is aware of the Polynesian and Hawaiian genealogy of modern-day surfing, all who engage with the current elements of the practice are historically tied to these origins.

Our data support Shove et al.'s (2012) claim that practices themselves do not move and indicate that practices emerge through linkages among practice elements and other systems of practices. As practices emerge, they are inherently embedded, at some level, within systems of practices and their associated social structures and institutions (i.e., norms; rules of the game—Scott 2001). Practice diffusion not only involves recognizing original practice elements but also requires consideration of pre-existing practices and dominant noncarrier institutions (Humphreys 2010). Prior research on practices such as gambling (Humphreys 2010), dressing (Sandikci and Ger 2010; Scaraboto and Fischer 2013), and yoga (Ertimur and Coskuner-Balli 2015) reflect the influence of institutions on practice elements and overall practice acceptance and legitimation. Practice embeddedness is reflected in the multifaceted nature of a practice that is linked with multiple systems of practices across diverse cultural contexts (Akaka, Vargo, and Schau 2015).

Implications for Consumers, Organizations, and Policy Makers

In the findings section above, we trace the movement of practice elements throughout cross-cultural and cross-national systems of practices. Our data reveal that as practice elements link, and practices emerge and reproduce, they can be divisive among communities (demarcation), provide a new way of doing something (imitation), integrate with other social structures (acculturation), and change and be changed (innovation). The discussion of underlying dimensions of practice reproduction elaborates the theoretical contributions of this study for consumer research on both diffusion and practice, by highlighting how patterns of reproduction can potentially underlie S-shaped adoption curves. Here, we outline practical implications of our historical analysis of surfing diffusion for consumers, organizations, and policy makers who aim to accelerate or

restrict the diffusion of particular practices, or drive practice change.

The varied outcomes of practice reproduction are critical during times of drastic change, as lack of stability can be threatening (Campbell et al. 2020). Prior research reveals important insights into consumers' "adaptive responses" to various threats, from dealing with tragic events (Marcoux 2017) to disruptions of daily routines (Phipps and Ozanne 2017). These reactions enable "consumers and markets to 'get along' in altered and uncertain circumstances" (Campbell et al. 2020, 315). However, a process of "adaptation," is needed to support long-term change. The processes that fuel practice adaptation, and thereby diffusion, and the dimensions underlying outcomes of practice emergence are especially critical to consider during rapidly evolving social change. Recursive feedback loops become quicker and more impactful as movement of practice elements, and associated processes of transposition, codification, and adaptation, are accelerated.

On March 11, 2020, the World Health Organization declared COVID-19 as a global pandemic. Although signals of the pandemic existed prior to this declaration, there was little time to prepare for what was to come. Of the many disruptions, education is arguably one of the most highly impacted areas. Threats to the continuity of primary and secondary education, as well as higher education, have impacted families worldwide. Initial reactions and adaptive responses to the pandemic include shutting down schools and putting the youngest of students online. The pandemic continuation has sparked ongoing debate around new normative practices. As the severity of the pandemic ebbs and flows, the (re)emergence of new practices across households, schools, and communities is certain. In contrast to research focusing on self and other oriented appeals designed toward immediate compliance (Allcott et al 2020; Cheng, Lam and Leung 2020; Dobusch and Kreissl 2020), our research indicates consumers, organizations and policy makers must consider existing meanings, materials, and competences when promoting the diffusion of new practices. Our findings suggest that practice adaptation requires alignment with existing systems of practices. To highlight the applicability of our study, we explore our findings against a backdrop of primary and secondary education during the pandemic.

Our framework points toward the need for transposition of materials, such as computers, and codification of competences, such as learning online, in order for adaptation of remote learning practices to take place. If planning for practices (Thomas and Epp 2019) is not an option, dispersed community practices, such as welcoming, empathizing, evangelizing, and badging (Schau et al. 2009), can support adaptation of integrative practices, such as parent-supported teaching. As consumer voices grow in size and strength, and citizens use different avenues (e.g., social media) to support or change particular behaviors,

understanding how new practices align with existing systems of practices can increase the acceleration of practice diffusion. Codification and transposition support practice adaptation and can create connections across social structures. For example, to help others with adapting new practices (e.g., supervising learning from home) consumers can help to transpose material artifacts (e.g., dining tables) by making explicit the meanings associated with these materials (e.g., social media posts about how to create a classroom in your dining room). Consumers can help others codify practices by encoding tips on how to engage in a particular practice (e.g., e-learning), especially if it's complicated in nature. At a time when individuals may have more influence (e.g., social media) and access to resources (e.g., individuals sewing masks for neighbors) than companies, it's helpful to consider how consumers contribute directly to practice diffusion.

For organizations, such as businesses, social enterprises, and nonprofits, who are trying to influence the diffusion of a practice, the importance of codification and transposition is amplified. Primary education schools who want to change parents' practices, to increase collaboration, volunteerism, or compliance, must be able to encode a practice, or make clear connections between the competencies that are needed and why they matter. Although letters or emails to parents are written for this particular purpose, the importance of a message may not be clear. The codification of a practice relies on both competence and meaning, so it's not enough to understand how to enact a practice, parents must associate the action with a compelling meaning. Furthermore, transposition of material artifacts, such as the introduction of a new software or hardware, also requires a meaningful connection. If parents understand the importance of learning something new (e.g., software), they will be more likely to perform the desired practice.

For policy makers, it is helpful to consider a policy or a law as a material artifact. One that may or may not transfer with desired meaning (transpose). The development of solutions to address problems like providing education during and after a pandemic (i.e., a wicked problem) require consideration, not only of what should citizens do, but also, what will they actually do, and how (codification). Given the scope of the diffusion effort for global policy makers, it is important to consider that what might be meaningful in one way to one group of people, may not have the same meanings for another. The cross-cultural and cross-national nature of this study underscores varying viewpoints and egregious inequities across a variety of social situations, which should be considered when policies are made to provide support for families. In order to foster diffusion of particular practices, policy makers should factor in how different groups might adapt the policies and resources made available to meet their own needs and align with existing practices. Blanket policies for all citizens may not be the most effective approach, and systems of practices of diverse citizens should be considered in the design of government-based solutions.

CONCLUSION

This study contributes to prior research on consumer diffusion by moving beyond adoption and identifying a mesolevel process through which a practice is adapted into systems of practices. We also extend prior research on consumption-based practices by revealing a recursive feedback loop that connects different forms of practice reproduction with macro-level structures and micro-level actions that ultimately reshape both a practice and the systems of practices in which it is embedded. In addition, we find that when practices are reproduced across extended time and (sociocultural) space, practice reproduction depends on two underlying dimensions: practice alignment and embeddedness. Importantly, our data highlight the dynamic and evolutionary nature of systems of practices and the importance of noncarriers in shaping a practice diffusion process and the wider social structure.

This exploration of the cross-cultural, cross-national diffusion of surfing provides a robust and widened lens to study practice diffusion, beyond prior consumer research on diffusion and practice. However, this study has limitations and opportunities for future research. Some may suggest surfing is unique due to its indigenous origins and its concurrent countercultural and popular culture appeal. We argue that surfing is not a unique research context for the study of practice diffusion, in that it represents an enduring and wide-spread practice. That said, other contexts may, reveal alternative or additional linkages between practice elements and/or outcomes of practice reproduction. We highly encourage further exploration of the processual links and reproduction outcomes that could uncover the cultural genealogy of a practice.

In our historical and ethnographic analysis, we bridge thick micro-level emic perspectives with broad macro-level etic views (Askegaard and Linnet 2011); however, more work is needed to identify different contextual factors that contribute to the likelihood of practice diffusion, and how patterns of practice diffusion may vary and change. This might include studies to investigate how individual experiences shape adaptation and reproduction of practices and their outcomes on identity projects or consumption journeys (Schau and Akaka 2020), as well as broad sociocultural change. Future research is needed to explore the relationship between consumption experiences and practice diffusion.

We agree with others in recognizing the importance of practice alignment in diffusion (Phipps and Ozanne 2017; Thomas and Epp 2019). However, we find that when interconnected practice elements misalign with dominant systems of practices, innovation can occur. It would be

advantageous to know what the right balance of alignment and misalignment is for practice innovation and whether or not that differs across types of practices and sociocultural contexts. Furthermore, the innovative outcome of practice diffusion has been recognized in prior research (Rabadjieva and Butzin 2020), but our data suggest that the drop off the adoption S-curve (Rogers 2003) may not mean the acceleration of diffusion is decreasing. Rather it may indicate that practice innovation is continuing as a new curve begins, and the practice itself continues to adapt and diffuse (Vargo et al. 2020). This does not suggest that prior measures of consumer diffusion (e.g., adoption rates) are unimportant; rather our findings highlight that different ways of conceptualizing innovation as an outcome, process, or even a mindset (Kahn 2018) can lead to different perspectives for studying innovation (Vargo et al. 2020). We believe alternative viewpoints for investigating practice diffusion can lead to a deeper understanding of innovation.

Finally, the ecosystems view of practices indicates that changes in one practice (or elements of a practice) will inevitably impact changes in other practices. A closer examination of systems of practices at macro and meso levels and how they recursively impact micro-level actions can provide additional insights into the long-term adaptation and evolution of a practice, and the extended consequences of practice diffusion on consumption, markets, and society at large.

DATA COLLECTION INFORMATION

The first and second authors collected archival and ethnographic data to trace the process of practice diffusion, and the spread of surfing. This is the dissertation field site of the first author. The original ethnographic (i.e., interviews, photographs, and fieldnotes) and archival (i.e., articles, movies, books, magazines) data were collected by the first author in Hawaii between 2009 and 2012. Additional ethnographic and archival data were collected in Hawaii and California between 2012 and 2020 and reanalyzed in an iterative fashion by the first and second authors. The final revision of the article was jointly authored with input from all three coauthors. Given the size of our dataset, our data are stored and cataloged in various ways. Much of the historical and archival data we collected and analyzed are not captured in a sharable digital format (e.g., books, magazines, movies, photographs). Some archival data are housed in one of two locations: HB Surf Museum and Hawaiian historian private collections. Most of the digitally formatted data are stored on the hard drives and password-protected cloud-based folders of the first and second author. Due to the identifiable nature of these data access is limited. Some digital data, such as websites, movies, videos, blogs, and public social media posts are

publicly available and may be searched at any time. Online article archives hold the digital content. Data related to consumption journeys appear in a paper published in 2019 at the *Journal of the Academy of Marketing Science*, however, no data that speak to the process of practice diffusion was used in that study. The only overlap is the field site, surfing.

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