



About time in marketing: an assessment of the study of time and conceptual framework

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Abstract

An inspection of time-related research in marketing documents two dominant conceptualizations of time: objective time and subjective time. Objective time is straightforward, and refers to clock time. In contrast, subjective time is quite nuanced and refers to the differential experience and perception of time. Recognizing this distinction, a number of scholars have suggested that the marketing discipline relies upon objective time, and as a result, does not have a fully developed understanding of time. Conducting a historical assessment of time, we demonstrate that marketing has a conceptually-bounded view of time. We develop a conceptual framework that reconceptualizes time as objective and subjective and as experienced by multiple referents, and develop research propositions that highlight the importance of integrating a broadened view of time into marketing research, recognizing that we are better off thinking about time as objective time and subjective time. We conclude with a discussion highlighting future research opportunities.

Keywords Time · Subjective time · Objective time · Conceptualizing time · Conceptual framework

Time has been critical to many marketing management and consumer behavior topics, including for example: time-to-market; time allocation; temporal discounting; temporal framing; the product lifecycle; product adoption rates; managerial and consumer decision-making; and many others (see for example, Baker and Cameron 1996; Bowman and Gatignon

1995; LeBoeuf 2006; Venkatesan and Kumar 2004). A careful inspection of this large body of work documents two dominant conceptualizations of time: objective time and subjective time. *Objective time* is straightforward, and refers to time as represented by a clock (Hornik 1984). In contrast, *subjective time* is quite nuanced and refers to the variant nature of time, which is depicted as a socially constructed process that individuals, organizations and cultures differentially experience (adapted from Orlikowski and Yates 2002). Recognizing this distinction, a number of scholars have suggested that the marketing discipline relies upon objective time, and as a result, the field does not have a fully developed understanding of time (Bergadaà 1990; Davies 1994; Graham 1981; Woermann and Rokka 2015). The central tenet of this manuscript is to demonstrate that time has multiple and varied meanings to multiple and varied entities, and that the recognition that time is differentially perceived and experienced – as represented by the concept of subjective time – has profound implications for marketing research and practice.

Recent work across multiple disciplines, including management, organizational behavior, and, to a lesser extent, marketing, demonstrates the value of studying subjective time (Cotte et al. 2004; Kaufman-Scarborough 2006; Lee and Liebenau 1999; Lynch Jr. et al. 2010; Mosakowski and Earley 2000; Zauberman et al. 2009). Although marketing

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scholars have long called for a more comprehensive treatment of time (Graham 1981; Jacoby et al. 1976; Kaufman et al. 1991), marketing has yet to incorporate subjective time into alternative/rival temporal frameworks, particularly within the marketing strategy/management domain (hereafter labeled marketing management). With very few exceptions (e.g., see Johnson et al. 2012), research in marketing management has predominately studied objective time, depicted as a linear force comprised of homogeneous units which are regular, precise, deterministic and measurable – e.g., seconds, minutes, hours, days, weeks, months, years, etc. (Ancona et al. 2001a; McGrath 1988). Both types of time are important to the field of marketing, and we agree that the marketing domain's study of time as objective time has been highly valuable and is an important facet of studying marketing management and consumer behavior. However, we suggest that because studying time from an objective point-of-view excludes how people and organizations actually perceive and experience time, studying subjective time could further augment time-related work in marketing.

Despite the importance of time in marketing scholarship and the appeal for studying alternative types of time, there still has been no systematic historical assessment of time as a construct, nor of its conceptual evolution in marketing research (Yadav 2017). Therefore, our first contribution is to conduct the first systematic historical assessment of time in marketing research through a seventy-five year temporal examination of top marketing management and consumer behavior journals, and empirically demonstrate that to date, 1) marketing scholars have utilized a conceptually-bounded view of time, and 2) have under-utilized alternative types of time and time-related concepts within their research endeavors.

Building upon this historical assessment, our second contribution is that we develop a broadened conceptual framework of time that incorporates both objective and subjective time, as well as multiple referent (i.e., individual, organization, and culture) perspectives. With this, we answer recent calls for theoretical contributions in marketing scholarship (MacInnis 2011; Yadav 2010) and illuminate several promising future opportunities for studying subjective time, with particular emphasis on the marketing management domain. Our conceptual framework of time yields three critical benefits: 1) it provides a systematic means by which to consider objective time and subjective time within marketing processes; 2) it aids in integrating subjective time into future marketing research efforts; and 3) it provides a useful conceptual tool to both consumer behavior and, particularly, marketing management researchers to use in understanding the temporal assumptions made in their respective areas of marketing research.

Drawing from our conceptual framework of time, our third contribution is to develop several general research propositions. These research propositions highlight the importance of integrating a more holistic view of time into marketing

research, recognizing that we are better off thinking about time together as objective time and subjective time rather than separately. Overall, our research propositions provide a systematic means to adopt objective time, subjective time and referent perspectives within marketing processes, and to guide future research about time and time-related factors in marketing, with the underlying objective of advancing the field.

Our manuscript proceeds as follows: we begin by exploring alternative interdisciplinary conceptualizations of time with an emphasis on the distinction between objective time and subjective time. We next empirically examine the past seventy-five years of temporal work in ten of marketing management and consumer behavior's top journals to fully assess marketing's study of time. Using that assessment as a foundation, we highlight the important functions that objective time has provided in marketing, and we further explore the nature of subjective time to develop our proposed conceptual framework of time. In developing our conceptual framework of time, we develop research propositions and highlight how marketing has studied time to date, with particular emphasis placed on overlooked research opportunities. We conclude by discussing the value of integrating subjective time in future marketing research and how a more developed view of time can enrich marketing scholarship and thought.

Defining objective and subjective time

Research in many disciplines, including marketing, documents that time entails a wide range of time-related constructs. As a result, time is associated with myriad meanings (Bergadaà 1990; Davies 1994). Lee and Liebenau (1999, p. 1036) lament, “while time is both ubiquitous and experienced by all, a coherent understanding of time has remained a riddle unsolved throughout history to the present day.” This lack of consensus is not unexpected, given that time is a central construct for many disparate disciplines – biology, psychology, sociology, organizational studies, and management – and that time is defined in many different ways – such as absolute time, and biological time (Whitrow 1980, 1988). Moreover, this breadth has led to a proliferation of time-related concepts, including e.g., temporal orientation. Whitrow (1980, 1988) details how our understanding of time has evolved and compares several conceptualizations, including absolute time (e.g., time flows equally without relation to the external world), cyclical time (e.g., time repeats as seasons), human time (e.g., individuals' subjective experience of time), and biological time (e.g., time patterns internal to living organisms).

For the past two decades, contemporary scholars in diverse disciplines have reduced the diversity of time-based concepts by distinguishing objective time from subjective time using several dichotomous labels: homogeneous versus heterogeneous time, regular versus irregular time, objective versus

experiential time, clock versus event time, fungible versus epochal time, and absolute versus relative time (Ancona et al. 2001b; Bluedorn 2002; Halbesleben et al. 2003; McGrath and Tschan 2004; Mosakowski and Earley 2000; Orlikowski and Yates 2002). Indeed, review across numerous disciplines, including management (Mosakowski and Earley 2000), organizational studies (Lee and Liebenau 1999; Orlikowski and Yates 2002), psychology (McGrath and Tschan 2004), and marketing (Hornik 1984), indicates a consistent reliance on the higher-order conceptualizations of time that we call objective time and subjective time. Interestingly, subjective and objective time as conceptualizations of time have roots that extend back to Greek rhetorical theory (Jacques 1982; Poulakos and Poulakos 1999). Greek rhetoricians distinguished between *chronos*, which refers to “chronological, serial time” (e.g., duration), and *kairos*, which stems from moments of opportunity and is the “time not of measurement but of human activity” (Jacques 1982, pp. 14–15).

Objective time, often referred to as clock time, is independent from social context and thus is uniformly experienced. Objective time comprises homogeneous units that are regular, precise, deterministic, and measurable (Ancona et al. 2001b; McGrath 1988), e.g., seconds, minutes, and hours. The clock is a metaphor to represent objective time (Orlikowski and Yates 2002). Objective time, symbolized through a clock, is a human creation devised to aid in synchronizing religious ceremonies (Stevens 1993) and measure work hours in industrial societies (Lee and Liebenau 1999). A clock provides the building blocks (e.g., seconds, minutes, hours) for multiple types of temporal changes: days, weeks, months, years, duration, deadlines, age, speed, and ordinal rankings. According to Orlikowski and Yates (2002), most temporally-based studies of organizations adopt this perspective. In contrast, subjective time recognizes that individuals, organizations, and cultures experience and perceive time differently (Orlikowski and Yates 2002; Shipp et al. 2009). In particular, subjective time recognizes that the perception and experience of time is socially and culturally constructed and varies across individuals, organizations, and cultures (Halbesleben et al. 2003; Orlikowski and Yates 2002). Next, we discuss our systematic historical assessment of time research in marketing.

A systematic historical assessment of the study of time in marketing

Consistent with other domain-specific research on time, the purpose of our systematic historical assessment is to study how marketing has used objective and subjective time and their subtypes¹ (Ancona et al. 2001a; Graham 1981; Shipp

et al. 2009). Distinguishing between objective and subjective time serves as the primary basis for formally assessing marketing time research. Related disciplines (e.g., management, organization studies) have relied on this approach to assess their fields (Ancona et al. 2001a; Lee and Liebenau 1999; Mosakowski and Earley 2000; Orlikowski and Yates 2002). Using this distinction, Mosakowski and Earley (2000) assessed the study of time in the management and organizational behavior domains, finding that, historically, studies in management and organizational behavior focused on objective time. This insight led to greater incorporation of subjective time in subsequent temporal research in management and organizational behavior.

In our historical assessment, we examined 853 time-related studies in the ten well-known marketing journals shown in Table 1 (the full procedure is described in the Web Appendix). We classified the study of time in each article as either subjective or objective time, as well as the type of objective or subjective time dimension studied. Of the 853 studies, an overwhelming majority (792, 93%) focused on objective time, whereas only a small minority (61, 7%) focused on subjective time (see Table 2). Among sub-classifications of objective time, ordinal time, which uses clock time to denote rank and order (588, 74%), has received substantially more attention than clock time (204, 26%). For example, ordinal time has often been used to capture how long it takes to get a product to market, or for competitors to respond (Bowman and Gatignon 1995). Shankar et al. (1998) provide an example and demonstrate that an innovative late mover (i.e., measured objectively by the amount of time that has passed between the pioneer and the responding firm) can create advantages over the pioneer in market growth, market share potential, effect on pioneer’s advertising spending, and repeat purchases. Of the 61 subjective time² articles, subjective time perceptions (53%) have received the most attention, followed by temporal orientation (29%), polychronicity (6%), social time (6%), and other (6%) subjective time dimensions.

Compared to subjective time, objective time has received vastly more coverage across both the marketing management and consumer behavior domains, and objective time, despite its far greater usage, is more narrowly focused than subjective time. For example, work in consumer behavior shows that temporal orientation, defined as how one perceives time (present vs. past vs. future), influences consumer perception, attitudes, and consumption (Cotte et al. 2004; Lynch et al. 2010; Zimbardo and Boyd 1999). We argue that, while using an objective time lens has provided numerous important insights, these insights are limited and that a broadened conceptualization of time will provide additional valuable contributions.

¹ For example, Table 5 distinguishes between three types of subjective time, in addition to several corresponding subtypes.

² The 61 articles represented 66 total subjective time themes because some articles studied multiple dimensions (e.g., an article that studied subjective time perception and social/cultural time).

Table 1 Journals represented in the review of time in marketing

Marketing Journals	Publication Time Horizon	Number of Articles
Journal of Marketing	1936 to 2015	176
Journal of Marketing Research	1964 to 2015	195
Journal of Consumer Research	1974 to 2015	107
Marketing Science	1983 to 2014	120
Journal of the Academy of Marketing Science	1974 to 2014	46
Journal of Retailing	1964 to 2015	47
Journal of Consumer Psychology	1992 to 2015	11
International Journal of Research in Marketing	1995 to 2015	25
Marketing Letters	1990 to 2015	59
European Journal of Marketing	1977 to 2014	67
Overall Time Horizon and Total Number of Articles	1936 to 2015	853

Second, we examined the extent to which the marketing management and consumer behavior domains have utilized objective and subjective time. Of the 853 time-based articles in marketing, roughly 75% were in marketing management and 25% in consumer behavior. Not surprisingly, both disciplines have studied or treated time as objective time considerably more than as subjective time, with 153 of 211 (73%) consumer behavior articles focusing on objective time, and 639 of 642 (99.5%) marketing management articles focusing on objective time. In other words, the vast majority of subjective time work appears in consumer behavior (58 of the 61 articles utilizing subjective time) as opposed to marketing management (3 of the 61 articles utilizing subjective time) (see Table 2 for a summary). It is important to recognize that this small sample of marketing management articles limits our trend analysis, however, it is what we have with which to work.

Third, we examined the evolution of subjective time research over time in the marketing literature. Table 3 summarizes subjective time article publications by decade. Although subjective time was studied in the 1970s, 80s, and 90s, a considerable majority (46 of the 61 or 75.4%) of articles studying subjective time were published after the year 2000. Articles from the 1970s, 80s, and early 90s primarily included consumer-behavior work that argued the need to conceptualize and study time beyond an objective-time point-of-view (for example, Bergadaà 1990; Graham 1981; Jacoby et al. 1976). Similarly, two of the three marketing management articles that studied subjective time were published after 2005 (Arndt et al. 2006; Yadav et al. 2007). Thus, scholarly attention to subjective time has been steadily increasing in both consumer behavior and marketing management research in recent years.

Table 2 Objective time and subjective time by marketing domain

Objective Time/Subjective Time and Representative Time Dimensions		Marketing Domain ^a		Row Totals
		Consumer behavior	Marketing Strategy/Management	
Objective Time: Total Number of Articles		153	639	792
Objective time	Clock time	96	108	204
Dimension totals	Ordinal time	57	531	588
Subjective Time: Total Number of Articles		58	3	61
Subjective Time dimension totals ^b	Subjective Time Perception	35	0	35
	Polychronicity/Monochronicity	3	1	4
	Temporal Orientation	18	1	19
	Social Time	4	0	4
	Other (e.g., Event Time)	3	1	4
Total Number of Objective Time and Subjective Time Articles		211	642	853

^a Includes the following journals: Journal of Marketing; Journal of Marketing Research; Journal of Consumer Research; Marketing Science; Journal of the Academy of Marketing Science; Journal of Retailing; Journal of Consumer Psychology; International Journal of Research in Marketing; Marketing Letters; European Journal of Marketing

^b Totals for the subjective time dimensions may not equal the total number of articles for a specific marketing domain because some articles studied multiple dimensions (e.g., an article that studied subjective time perception and social/cultural time)

Table 3 Subjective time by decade

Objective Time/Subjective Time and Representative Time Dimensions		Subjective Time By Decade ^a				Row Totals
		1970s	1980s	1990s	2000 to Present	
Subjective Time Dimension Totals ^b	Subjective Time Perception	3	4	4	23	34
	Polychronicity/Monochronicity	0	0	1	3	4
	Temporal Orientation	0	0	1	18	19
	Social Time	0	2	1	1	4
	Other (e.g., Event Time)	0	0	1	3	4
Subjective Time: Total Number of Articles		3	4	8	46	61

^a Includes the following journals: Journal of Marketing; Journal of Marketing Research; Journal of Consumer Research; Marketing Science; Journal of the Academy of Marketing Science; Journal of Retailing; Journal of Consumer Psychology; International Journal of Research in Marketing; Marketing Letters; European Journal of Marketing

^b Totals for the subjective time dimensions may not equal the total number of articles for a specific marketing domain because some articles studied multiple dimensions (e.g., an article that studied subjective time perception and social/cultural time)

Fourth, we classified the referents (i.e., individual, organization, and culture) studied within the sixty-one consumer behavior and marketing management articles. A few consumer behavior researchers recognized the importance of the social-cultural environment in shaping consumers' perception of subjective time (e.g., Cotte et al. 2004). Overall, we find evidence that seven studies recognize that culture and/or organizations may influence an individual's subjective time. Nonetheless, the vast majority of marketing research – all sixty one articles – has predominately studied time from an individual referent perspective. In addition, few studies – two articles – in consumer behavior and marketing management have integrated an organizational perspective into time-based research.

Fifth, we classified the key variables studied in the sixty-one marketing management and consumer behavior articles (specifically the three marketing management and fifty-eight consumer behavior-focused articles). The Web Appendix contains details related to the classification of key variables. We find evidence that these divide into seven categories; and that development within these categories has occurred at an increasing rate over time. The earliest time related research in marketing occurred in the 1970s (two studies) and focused on time perceptions and time related behaviors. Five studies in the 1980s contributed a new category: intentions. Eight studies in the 1990s added two new categories: processes and attitudes. Fifteen articles in the decade of the 2000s continued examination of these categories but added another category: interests. Finally, 31 studies in the first six years of the 2010s continued the refinement of the previous categories but added another: opinions. Whereas the number of articles has increased exponentially, the progression of topics of temporal research has been more linear, increasing from two categories in the 1970s to seven categories in the 2010s.

To summarize, 853 time-based articles published across ten well-known marketing and consumer behavior journals over

the past seventy-five years support an important link between time and marketing processes. However, despite this substantial body of research, we find that: 1) the study of time has been largely one-sided; objective time has been studied much more than subjective time (93% to 7%); 2) consumer behavior, compared to marketing management, has studied subjective time much more (roughly 27% to 0.5%); 3) subjective time has been all but ignored in marketing management (3 of 642 studies); and 4) subjective time research in both marketing management and consumer behavior has increased over time (75% and 66% respectively) and focused on developing different categories of variables.

A conceptual framework of time in marketing

Broadening the conceptualization of time to include *both* objective time and subjective time should offer informative and valuable lenses for considering the role and impact of time in marketing, and particularly marketing management. Accordingly, we reconceptualize time as a holistic construct composed of two first-order dimensions, objective time and subjective time. We define objective time as *clock time, with specific measurement using standardized time units*, and subjective time as *the differential experience and perception of time across individuals, organizations, and culture*. Next, we explore the nature of subjective time, the foundation for our conceptual framework of time.

Additionally, as depicted in Table 4, to take stock of what we know about time in the marketing discipline (Yadav 2017), we assess the use of objective time and subjective time in marketing management and consumer behavior research and highlight future research opportunities. For instance, we know that objective time and subjective time play different roles (see Table 4), and that objective time has been studied extensively in both marketing management and consumer behavior

Table 4 Summary of Objective and Subjective Time in Consumer Behavior and Marketing Management

	Time Related Research in Consumer Behavior	Time Related Research in Marketing Management
Objective Time	<p>Objective Time Dimensions Studied: Clock Time and Ordinal Time</p> <p>Objective Time Functions and Illustrative Key Finding:</p> <ul style="list-style-type: none"> • Allocation and Utility. Employed- vs. nonemployed-wife families use different time-saving strategies (Nickols and Fox 1983) • Informing. The explicit provision of “waiting time guarantees” enhances satisfaction both during and at the end of the wait (Kumar et al. 1997) • Signifying. Spending across products changes as households lifecycles evolve (e.g., young and single to older and married) (Wilkes 1995) • Framing. Consumers focus on concrete attributes in near-future events and abstract aspects in the distant-future (Mogilner et al. 2008) <p>Subjective Time Dimensions Studied: Subjective Time Perception; Polychronicity; Temporal Orientation; Social Time; Other</p> <p>Subjective Time Illustrative Key Findings:</p> <ul style="list-style-type: none"> • Time is malleable; Several factors (culture) impact our experience of it (Cotte et al. 2004) • Many context externalities affect consumer perceptions of objective time (i.e., duration) including, for example: background music (Baker and Cameron 1996) • Consumers, firms and cultural constituencies differ in their subjective time perceptions of clock time (McGrath and Tschan 2004) • Time has significant consequences; Mantel and Kellaris (2003) suggest that subjective time perception may influence outcomes such as satisfaction <p>Future Research Opportunities:</p> <ul style="list-style-type: none"> • Referents of Subjective Time and Interplay among Referents. Most work has focused on individual referents (e.g., subjective time perception). Culture has been recognized by consumer behavior research; however, there is opportunity to study time along with the interactions among various referents • Davies (1994) asserts that using a clock (i.e., objective time) is misleading in many circumstances such as studying how wait time affects consumer's attitudes • Exploring the relationship between how subjective time is thought about and used is a relatively unexplored research area in marketing • The majority of consumer behavior work has studied situational influences and marketing management has not integrated context in conjunction with time into its research 	<p>Objective Time Dimensions Studied: Clock Time and Ordinal Time</p> <p>Objective Time Functions and Illustrative Key Finding:</p> <ul style="list-style-type: none"> • Differentiation. Distinguishing pioneering products from late entrants (Kerin et al. 1992; Szymanski et al. 1995) • Assessment. A reduction of clock time serves as a feedback mechanism in measuring effectiveness (e.g., speed-to-market) (Fang 2008) • Identification and Measurement. Segmentations based on time use (Schary 1971); Product cycle development time (Griffin 1997) • Prediction. Time periods (e.g., one-year) and used in CLV calculations to predict future purchase frequency (Venkatesan and Kumar 2004) <p>Subjective Time Dimension: Polychronicity and Temporal Orientation</p> <p>Subjective Time Illustrative Key Findings:</p> <ul style="list-style-type: none"> • Temporal focus (past, present) has significant impact at firm level (Yadav et al. 2007) • Future temporal orientation may increase innovation success potential; past temporal orientation may increase product failure likelihood (Yadav et al. 2007) • Organizational context influences the use and thought of subjective time (Arndt et al. 2006) • A fit between subjective time and context improves employee performance levels and job-related attitudes (Arndt et al. 2006)
Subjective Time		

literature whereas subjective time has not. Objective time is a construct external to individuals and organizations, and that quantifies the movement of time (e.g., 3 months versus 1 month) and/or distinguishes order and sequence (e.g., first-to-market).

We also know that the study of objective time has served different functions in marketing. In the marketing management domain, this includes: 1) differentiation (e.g., distinguishing pioneering products from late entrants); 2) assessment (e.g., measuring speed-to-market); 3) identification (e.g., discovering consumer segmentations); 4) measurement (e.g., product-life-cycles over time); and 5) prediction (e.g., using Consumer Lifetime Value to predict future profits). For example, considerable attention has been devoted to ascertaining how firms allocate resources in deciding when to release a product (e.g., first-mover or late entrant) (Kerin et al. 1992). It is noteworthy that both objective time and the various functions of objective time are critical to organizations and their respective marketplace successes. Grounded by work by Becker (1965) on the utility and productivity of time, this is heightened still further if one accepts the belief that “time is money.” The uses of objective time in consumer behavior include: 1) identifying and allocating (e.g., measuring how long consumers travel); 2) informing (e.g., notifying consumers of remaining wait time); 3) signifying (e.g., using chronological age to classify consumers into generational categories); and 4) framing (e.g., an immediate versus a future event). Cutting across these functions is the observation that consumers have a limited supply of time, where “time is a resource,” and that individuals cannot escape the boundaries of objective time (e.g., 24 h a day).

It is beyond the scope of this paper to review and assess the large number of objective time studies in marketing; we believe that this task has been done well in prior research (see for example, Baker and Cameron 1996; Bowman and Gatignon 1995; LeBoeuf 2006; Venkatesan and Kumar 2004). As a result, we seek to build on what these objective time-related studies have helped us to already *know* (i.e., the objective aspect of time), with that which we *do not yet know* (i.e., the subjective aspect of time).

The nature of subjective time

What is the nature of subjective time? To speak broadly of subjective time, the only necessary conditions for time to be considered subjective is the existence of objective time and the recognition that individuals, organizations, and cultures do not necessarily experience time in terms of precise time units (e.g., seconds, minutes). Whereas objective time is characterized by increasing temporal equivalence, subjective time is characterized by increasing temporal distinctiveness and heterogeneity (Bluedorn 2002; Shipp et al. 2009). Similarly, while objective time does not change across context and

situations, subjective time can change relative to the situational context of the observer (McGrath and Tschan 2004). Table 5 shows several types of subjective time, labeled as subjective time dimensions. Although work on subjective time demonstrates that there are a number of ways that individuals, in particular, use, manage, and think about time, there has been limited research devoted to how to organize the different categories of subjective time. Looking across previous research (Ballard and Seibold 2003; McGrath and Tschan 2004; Shipp and Cole 2015), we find that scholars have organized their review of the different subjective time categories into three sections: subjective time perception, subjective time use styles, and subjective time thought processes. We use this structure to organize the various subjective time categories as reflected in Fig. 1. Overall, these three categories fulfill the conditions that are sufficient for time to be considered subjective.

The nature of subjective time reflects the idea that time can be thought about and experienced beyond the confines of a clock. Our first category of subjective time, *subjective time perception*, refers to how perceptions of objective time vary among individuals, groups, and cultures. Time is subjective when its perception deviates from the objectivity of a given time instrument (McGrath and Tschan 2004), an idea often reflected in popular phrases related to the subjective passage of time: *Time flies when you're having fun; that took forever; you have all the time in the world; have time to kill*. Table 5 depicts several ways that the subjective perception of time may deviate from the clock, including: objective time can be viewed as moving too fast or too slow, perceived time duration may not reflect objective time duration, and perceived time allocation could differ from objective time allocation. Overall, this research demonstrates that the subjective perception of time does not directly reflect the passage of objective time.

Subjective time encompasses more than a dissonance between objective time and subjective time perception. Time may be considered subjective with respect to how individuals, organizations, and cultures *experience* time beyond perception – that is the *thought processes* related to time and how time is *used* (Shipp and Cole 2015). Similar to Ballard and Seibold's (2003) enactments of time, *use styles* represent multiple and different ways that individuals, organizations, and culture experience and perform time. Although time usage can be measured through objective time (e.g., the minutes spent on a given task), subjective time use is often considered a between-individual, organizational, and cultural difference variable (Ballard and Seibold 2003; Hall 1983; Shipp and Cole 2015). Also considered a difference variable, the *thinking about subjective time* refers to the manner individuals, organizations, and cultures orient to time (Ballard and Seibold 2003; Shipp and Cole 2015). Table 5 depicts

Table 5 A Conceptualization of Subjective Time, its Types, and Illustrative Research Examples

Subjective Time: The differential experience and perception of time across individuals, organizations, and culture.		
<p>Dimension 1: Subjective Time Perception - time is subjective when its perception deviates from the objectivity of a given time instrument (McGrath and Tschan 2004). Examples of Subjective Time Perception Types (and Other Associated Construct Names):</p> <ul style="list-style-type: none"> ▪ Perceived Time Duration (Time Perception; Perceived Speed; Estimated Time), perceptions of time that do not reflect the movement of a clock such as time moving too fast ▪ Perceived Time Constraint, perceptions of time that do not reflect the clock such as feeling that there is not enough time ▪ Perceived Time Allocation, perceptions of time that do not reflect the clock such as how much time one thinks they spent on an activity <p>Dimension 2: The Thinking of Subjective Time - the manner individuals, organizations, and cultures orient to time (Ballard and Seibold 2003; Shipp and Cole 2015) Examples of Thought of Subjective Types (and Other Associated Construct Names):</p> <ul style="list-style-type: none"> ▪ Temporal Orientation (Temporal Focus; Long-Term Orientation; Time Horizon), the focus on the past, present or future (Schröber and Gutek 1987) ▪ Social/Event Time, the expression of changes of time in terms of other social phenomena as points of reference or as in terms of events as reference points (Ancona et al. 2001b) ▪ Making Time, control over time and using tactics to create time; belief that one can “make time” or “save time” (Flaherty 1999) ▪ Cultural Time, cultural constructions of time that are shared among cultures (Ancona et al. 2001b; Hall 1983) <p>Dimension 3: Use Styles of Subjective Time - the multiple and different ways that individuals, organizations, and culture experience and perform time (Ballard and Seibold 2003) Examples of Use of Subjective Types (and Other Associated Construct Names):</p> <ul style="list-style-type: none"> ▪ Polychronicity, a preference to juggle multiple tasks vs. balancing tasks in a sequential fashion (Kaufman et al. 1991) ▪ Monochronicity, a preference to complete tasks one-at-a-time in a sequential fashion vs. juggling multiple tasks (Kaufman et al. 1991) ▪ Multi-tasking, the behavioral component related to polychronicity and monochronicity; multi-tasking represents the action of completing multiple tasks at once/within a time block 		
<p>Examples of Relevance to Managers and Consumers:</p> <ul style="list-style-type: none"> ▪ Satisfaction; Waiting time perception; Events perceived as moving “fast” or “slow” ▪ Perceived time pressure; feeling rushed; deadlines approaching too soon ▪ Time perceptions; Perceived time spent on consumption activities <p>Examples of Relevance to Managers and Consumers:</p> <ul style="list-style-type: none"> ▪ Preoccupied with past decisions vs. future decisions; impact on project completion ▪ Work time, play time, personal time, social time, seasonal events ▪ How consumers use products to speed up, slow down wait times ▪ Cultural differences in appropriate waiting times 		<p>Illustrative Research Related to Dimension 1:</p> <ul style="list-style-type: none"> ▪ For enjoyable activities, time is underestimated compared to unenjoyable activities (Hornik 1984) ▪ Durations are judged longer than they really are by individuals under time pressure (Rattat et al. 2018) <p>Illustrative Research Related to Dimension 2:</p> <ul style="list-style-type: none"> ▪ Temporal orientation impacts a variety of individual attitudes and behaviors (Nevins et al. 2007; Zimbardo and Boyd 1999) ▪ Individuals make time through temporal manipulation, such as through controlling duration, which reflects an individual’s desire to make a circumstance seem longer or shorter (Flaherty 2003) <p>Illustrative Research Related to Dimension 3:</p> <ul style="list-style-type: none"> ▪ Polychronicity is associated with personality characteristics such as extraversion, willingness to change, high tolerance for ambiguity, and increased impatience, as well as with specific behaviors such as an increased frequency of being late (Benabou 1999; Bludorn 2002).

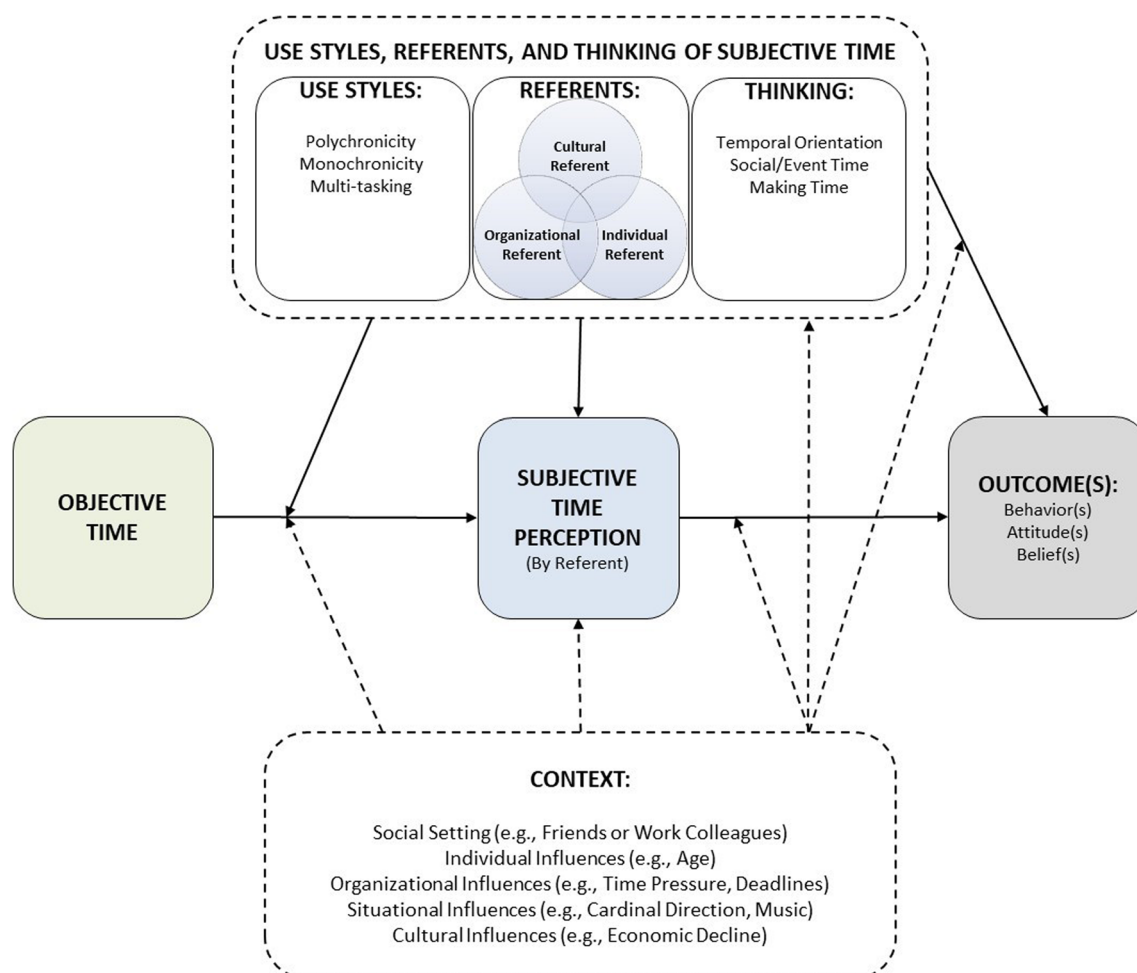


Fig. 1 A Conceptual Framework of Time

several types of subjective time *use styles* and *thinking about subjective time* including polychronicity, temporal orientation, social and cultural time, and event time. Time urgency, e.g., is considered an individual difference variable of how individuals differ in the consistency of their concern with time passage – individuals higher in time urgency feel hurried across situations (Ballard and Seibold 2003; Conte et al. 1998).

Figure 1 depicts the nature of subjective time and our conceptual framework of time. This framework includes three distinguishing features. First, it uses objective time and subjective time as primary classifications of time. Using this classification, we explore in greater detail aspects of subjective time specifically related to subjective time perception, and specifically related to the use styles and thinking of subjective time. Second, our framework recognizes the dynamic nature between objective time, context, and subjective time in influencing various outcomes (e.g., behaviors, attitudes). For instance, although objective time and subjective time – particularly subjective time perception – may operate simultaneously, objective time can also

influence the various categories of subjective time perception. Third, our conceptual framework acknowledges that subjective (but not objective) time varies by referent, labeled as *referents* in Fig. 1. In line with previous research, referent perspectives include: individual (e.g., employee, consumer) (Cotte et al. 2004; Lynch Jr. et al. 2010), organization (e.g., firm, group) (Ballard and Seibold 2003; Schriber and Gutek 1987), and culture (i.e., the values, beliefs, and learned behaviors shared by a society, such as national, regional) (Deshpande and Webster Jr. 1989; Graham 1981). We emphasize that perspective can and will change within, between, and across the referent categories, and highlight the significance of distinguishing subjective time across referents. In the following sections, we highlight specific areas related to how marketing management and consumer behavior have studied subjective time, and more importantly, where there are gaps in the current literature and future research opportunities (as depicted in Table 4). To reflect our framework and the research opportunities it suggests for marketing scholars, we advance a number of research propositions in the following sections.

Research propositions

Research propositions related to objective time and subjective time perception and its consequences

We begin with the idea that time may be conceptually and operationally considered using different lenses: an objective time lens, a subjective time perception lens, or a relationship that recognizes an interplay between both lenses as depicted in Fig. 1 with objective time directly influencing subjective time perception. There are several types of time constructs that can span both objective time and subjective time perception, such as duration, speed, and time allocation. Duration, for example, is a particular type of time that can be treated objectively or treated as a type of subjective time perception.

Despite the different names, Bluedorn (2002) imparts that all types of time as treated objectively recognize time as a uniformly experienced phenomenon, exclusive from the social world. In addition, time treated as objective time is comprised of predictable, measurable temporal units, and these temporal units are independent from individual, organizational and cultural differences, and social processes. An example of treating time as objective in the field of marketing includes distinguishing a pioneer from a later entrant in the same product category. This is captured through temporal differences based on a clock or calendar overlay and distinctions between near and distant time horizons – such as one-week versus three-months (e.g., Zhao et al. 2007). Hence, the clock and calendar provide objectivity that makes time relatively easy to understand and measure. In contrast, types of time such as duration and pace may also be processed as subjective, characterized by how individuals, organizations and cultures differently perceive time. For instance, examining how consumers, firms and cultural constituencies differ in their subjective time perceptions and clock time estimations is a popular consumer behavior topic (McGrath and Tschan 2004).

In addition to treating time using either an objective time lens or a subjective time perception lens, research demonstrates a direct relationship (e.g., a linear or a quadratic relationship) between the two types of time. Generally, research in this area recognizes that, as objective time moves, so does its subjective perception, but, that subjective time perception can differ radically from objective time (Hornik 1984; Mantel and Kellaris 2003; Zauberman et al. 2009). The distinguishing characteristics of this work capture how a given duration of objective time affects how individuals subjectively perceive that duration (Salmon et al. 2016) and relatedly, a focus on how individuals subjectively perceive the movement of objective time through two types of subjective time perceptions: retrospective and prospective subjective time perceptions (Hornik 1984; McGrath and Tschan 2004). Retrospective subjective time perceptions are based on a consumer's perceived duration of past events, and prospective subjective time

perceptions are based on a consumer's perceived duration of an event in the future. As an example, Salmon et al. (2016) demonstrate that subjective time perceptions tend to contract as the duration endpoint moves further into the future – a duration increase from 3-months to 12-months, a fourfold increase, is perceived subjectively as much less than four times their perceptions of how the 3-month duration feels. This suggests that individuals are less sensitive to longer durations of time. Hornik (1984) shows that individuals retrospectively overestimate waiting time and that, for enjoyable activities, time is underestimated compared to unenjoyable activities. Finally, Rattat et al. (2018) show that durations are judged longer than they really are by individuals under time pressure.

Subjective time perception is often treated as a dependent variable in research that studies how objective time affects subjective time perception (McGrath and Tschan 2004). Hence, it may seem unnecessary to treat time as subjective time perception in research work not studying how and why subjective time perception changes. However, there are at least two related reasons why it is important to consider time as subjective time perception: 1) previous research demonstrates that subjective time perception rarely corresponds to objective time, and 2) research should consider using subjective time perception if time is considered a key input variable (e.g., independent variable, mediator, and moderator) with specific consequent outcomes. For example, Zauberman et al. (2009) demonstrate that consumers' subjective estimates of duration do not accurately map onto objective time and find relatively constant discount rates when subjective perceptions of time are measured. Interestingly, this contrasts with traditional discount research which identifies a predictable, decreasing discount rate using objective time. For example, Zauberman et al. (2009) show that a consumer indifferent among \$100 today, \$1000 in 1 year, and \$2000 in 3 years, has an objective discount rate of 230% at 1 year and 100% at 3 years. However, if the consumer subjectively perceives 3 years as only 1.3 times longer than a year (versus 3 times longer), the discount rate would remain flat at 230%. Thus, compared to objective time, subjective time perception may yield new results.

To summarize, we propose that time can be viewed objectively or subjectively. We outlined how either or both of these conceptualizations may apply to a given situation. We also suggest that objective time influences subjective time perceptions. Because subjective time perception often does not correspond to objective time, treating time as subjective time perception should be considered if time is linked to specific consequences. Mantel and Kellaris (2003), for example, suggest that subjective time perception may influence outcomes such as evaluations, satisfaction, and consequent behaviors. Similarly, several marketing scholars have urged researchers to consider the use of subjective time perception. For instance, Davies (1994) asserts that using a clock (i.e., objective time) is misleading in many circumstances such as studying how wait

time affects consumers' attitudes, and Hornik (1984) asserts that the common practice of measuring time objectively should be challenged – research should exercise caution in relying on objective time methods such as time diaries that purport to be means of objectively measuring time. Taken together, this leads to our first research propositions. These research propositions provide a foundation for the structured study of subjective time and under what circumstances it is important to marketing research.

RP₁: Time may be conceptually and operationally considered as objective time and/or as subjective time perception, or as a relationship between objective time and subjective time perception.

RP₂: In addition to objective time, time should be treated as subjective time perception when it is linked to specific attitudinal and behavioral outcomes.

In addition, Fig. 1 shows that all three categories of subjective time have significant behavioral consequences. This is supported by time-based research in marketing. For instance, temporal orientation influences both attitudes and consumption (Cotte et al. 2004). Individually, a future time orientation is associated with a greater propensity to plan, an attention to credit rating (Lynch Jr. et al. 2010), and a greater focus on retirement planning (Howlett et al. 2008). Organizationally, future temporal orientation may increase the potential for innovation success, while a past temporal orientation may increase the likelihood of product failures (Yadav et al. 2007). Zimbardo and Boyd (1999) suggest that a present orientation is positively correlated with novelty-seeking (i.e., a tendency to be attracted to unfamiliar stimuli), while Hornik and Zakay (1996) contribute that product and/or service satisfaction depends on the amount of time spent, since searching and shopping requires the use of limited resources - including time. Taken together, these thoughts lead to the following research proposition, which provides a basis for how and when subjective time concepts affect marketing research:

RP₃: Subjective time perceptions, thinking, and use styles will have significant influence on referents' attitudinal and behavioral outcomes.

Research propositions related to what influences the process between objective time, subjective time perception, and its consequences

Reflecting Fig. 1, we consider three categories that play a significant role in affecting the process between objective time, subjective time perception, and its consequences: 1) the use styles and thinking related to subjective time; 2) referents of time; and 3) the effects of context. The following

sections explore each of these important influences of subjective time perception.

Influence one: How use styles and thinking of subjective time influences subjective time perception

As shown in Fig. 1, a number of subjective time types focus on different ways individuals, organizations, and cultures experience time. Ancona et al. (2001b) suggest that referents interpret, interact with, and experience time differently. Ballard and Seibold (2006) add that, although subjective time perceptions are associated with personal processes related to how individuals perceive time, the *differential experience* of subjective time dimensions focuses on the process of how individual, organizational, and cultural referents interpret and orient to time, a process we label as referents use styles and thinking of subjective time. Studies on time across several disciplines, including management, psychology, sociology, organizational research, and marketing, reveal several types of ways subjective time is experienced with respect to thinking of it and its use styles, including: temporal orientation, polychronicity, social and event time, making time, cultural time, temporal metaphors, temporal urgency, and temporal discounting. For illustrative purposes, as shown in Table 5, we discuss four specific types of subjective time: temporal orientation, polychronicity social/event time, and making time. Consistent with our third proposition, we also discuss consequences that have been associated with these types of subjective time. We then argue how these types of subjective time could be drivers of subjective time perception.

Temporal orientation Psychologists have proposed that differing temporal orientations –the relative significance individuals, organizations and cultures attach to the past, present and future – have significant effects (Bluedorn and Denhardt 1988; McGrath and Tschan 2004; Zimbardo and Boyd 1999). For individual referents, temporal orientation impacts a variety of individual attitudes and behaviors (Nevins et al. 2007; Zimbardo and Boyd 1999). For organizational referents, temporal orientation affects key firm activities and practices, including team performance (Hultink and Robben 1995; Waller et al. 2001); Mohammed and Nadkarni (2011) found that a future temporal orientation negatively impacted several measures of team performance. Finally, for cultural referents, research shows that temporal orientation varies widely across cultures (Hofstede 2003; McGrath and Tschan 2004). Although most Western and industrialized societies are considered future-oriented with a strong emphasis on a controllable future (McGrath and Tschan 2004), research actually demonstrates that China and Japan are considerably more future-oriented than the United States (Hofstede 2003).

Polychronicity Multidisciplinary research documents that polychronicity, a trait that captures a preference to juggle multiple tasks at once, differs among individuals (Cotte and Ratneshwar 1999; Kaufman et al. 1991), organizations (Bluedorn et al. 1999), and cultures (Hall 1983). For individual referents, polychronicity is associated with personality characteristics such as extraversion, willingness to change, high tolerance for ambiguity, and increased impatience, as well as with specific behaviors such as an increased frequency of being late (Benabou 1999; Bluedorn 2002). For organizational referents, research reports a direct positive link between polychronicity and firm performance (Onken 1999; Souitaris and Maestro 2010); Souitaris and Maestro (2010) show that polychronic management teams tend to acquire information that can change understanding via unplanned interactions with other people, internal and external to the organization, which increases key firm performance outcome metrics. Finally, for cultural referents, research has shown that culture can impact how individuals experience and enact time, including polychronicity (Cotte and Ratneshwar 1999; Hall 1983). Relatedly, some cultures operate monochronically, preferring to work on tasks one at a time, whereas other cultures operate polychronically (Graham 1981).

Social and event time Social time and event time are closely related (Bailey 2018). Social time is the expression of changes and movement of time in reference to other social phenomena (Sorokin and Merton 1937); event time is the movement of time in reference to specific events, including social and natural events (Bailey 2018; Brislin and Kim 2003). For example, using social time, we could refer to a meeting time as “after lunch” or a student may dread “finals week”. In these instances, social time can indicate a specific time or duration that may or may not reflect objective time; social time is also directly linked to social and group activities (Sorokin and Merton 1937). Overall, social and event time reflect social activities and are perpetuated by the need for social coordination.

Making time Making time reflects the idea that there is a level of individual awareness of temporal elements that allows for the manipulation of time such as making time feel faster or slower (Zerubavel 1987). Flaherty (1999, 2002) argues that individuals are capable of overtly changing temporal experiences by asking the following: What kind of temporal experience do I want to have? Thus, individuals may engage in the construction of their own circumstances to “customize” their own temporal experience (Flaherty 2002).

Flaherty (2003) has demonstrated several ways individuals make time through temporal manipulation. The first is through controlling duration, which reflects an individual’s desire to make a circumstance seem longer or shorter. For instance, one may try to speed up a boring moment such as waiting in line or

try to slow down to savor an enjoyable moment such as a nice dinner. The second is frequency, making a decision on how often something happens per temporal unit. This may include managing one’s temporal schedule to increase how often a desirable activity takes place. Sequencing, the third, is the customization of temporal order for specific events. Contrasted with habitual forms of behavior, sequencing may include planning and prioritizing how a difficult project will be accomplished. The fourth is timing, controlling when something happens. Timing, for example, may include completing an assignment in the early hours of the day, rather than letting social rules or common forms of scheduling dictate when and how behaviors are performed. The final classification is allocation, which recognizes that time is a limited resource and includes setting temporal blocks aside for important activities. Families often set aside “family time” or “quality time” each week. Or, a time-crunched individual may “make time” for recreational activities.

How the thinking and use styles of time influence subjective time perception Using previous interdisciplinary research as a foundation, we argue that the thinking and use styles of subjective time may influence subjective time perception or the relationship between objective time and subjective time perception. For example, Twenge et al. (2003) review previous work that shows that for suicidal individuals, a focus on the present is a defensive attempt to stop time and not think about the future and consequently leads to a distorted time perception in which the present seems to last longer than usual. This is in contrast to underestimated duration, which they argue is more characteristic of engaging in a meaningful and stimulating activity. In line with this, Twenge et al. (2003) demonstrate that when individuals are socially excluded, they tend to focus on the present rather than the future in addition to overestimating how much time has passed. Similarly, Hornik (1993) demonstrates that a future orientation was related to positive mood states and the underestimation of time passage; a present orientation was related to negative mood states and overestimation of time passage. Finally, Das (1991) and Das and Teng (1997) assert that future-orientation mitigates risk because of an increased likelihood to develop longer-range plans and initiatives, and demonstrate that executives (e.g., TMTs) with a future temporal orientation prefer longer objective time-based planning horizons. Together, this work supports the notion that thought about subjective time may significantly affect subjective time perception.

Overall, exploring the relationship between how subjective time is thought about and its use styles affect subjective time perception is a relatively unexplored research area in consumer behavior and marketing management. Consider the following potential research questions related to “making time”. For

instance, how do consumers selectively rely upon products and services to change their environmental circumstances to manipulate time (e.g., duration, frequency, timing, sequence, and allocation)? Is there a specific type of product or products (e.g., new media) that are used? Similarly, research suggests that polychronicity could influence perceptions of wait time. It is thought that individuals who prefer multi-tasking may not mind waiting or a disruption in their sequence of activities, and may have a greater propensity to fill wait time with meaningful activity that makes it seem shorter (Bailey 2018). In summary, we suggest that how subjective time is thought about and its use styles may directly influence subjective time perception of the relationship between objective time and subjective time perception.

RP₄: The thinking of and use styles of subjective time within and across referents of time can alter how time is subjectively perceived and the strength and nature of the relationship between objective time and subjective time perception.

Influence two: How referents influence each other and the process

One key aspect of subjective time is that any entity, be it an individual, organization or culture, or any combination thereof, can share in or own the experience of subjective time (Lee and Liebenau 1999). Sharing subjective time means that “time is fundamentally a social construction that varies tremendously between and within societies” (Bluedorn and Denhardt 1988, p. 300). Unlike objective time, subjective time is not a uniformly experienced phenomenon, rather it may include personal, organizational and cultural perceptions of time, with specific and nuanced regard to differences in the surrounding environment, cultures, social interactions, groups and individuals. As a result, subjective time is defined as an unfixed and relative entity, with perceptual and experiential variance across individuals, organizations, and cultures (Jacques 1982; Mosakowski and Earley 2000; Orlikowski and Yates 2002).

Individual referents Subjective time from an individual referent perspective, such as an employee or consumer, addresses how that individual subjectively and differentially experiences and perceives time. Dimensions of objective time consistently influence an individual’s work life, requiring decisions such as how to allocate an eight-hour workday, respond to upcoming deadlines, or schedule immediate and future events. Although an individual cannot alter or stop the passage of objective time, we have discussed several relevant dimensions of subjective time that describe how an individual uniquely experiences and perceives time.

Organizational referents Subjective time from an organizational referent perspective, such as a business, club, firm or division within a firm, captures how that specific group or those groups subjectively perceive and experience time. Ballard and Seibold (2003, p. 397) state that “organizations also have their own temporal perspectives and principles—even different sites of the same firm may have dissimilar orientations.” Likewise, Schriber and Gutek (1987) emphasize that different organizations establish unique temporal norms that dictate the management of time. Because individual social interactions constitute organizational time, individual referents within the same organization often operate under the same dimensions of objective time and as a result, tend to perceive and experience dimensions of subjective time in similar ways. Studies in sociology, organizational behavior, and marketing strategy have demonstrated commonalities in how time is experienced within organizations (Gherardi and Strati 1988; Lee and Liebenau 1999; Noble et al. 2002).

Cultural referents A cultural referent, such as a society, culture or sub-culture, also perceives and experiences time collectively and subjectively. For example, the American and Latino cultures differ in their respective perceptions and experiences of social time and how social life is structured and coordinated (e.g., a five-day work week, holidays, weekends). Sorokin and Merton (1937) define social time as the expression of changes and movement of social phenomena in relation to other social phenomena. Often, individuals from the same cultural group, for example Americans, Latinos, or Asians, share similar conceptions of time, and rely upon similar conceptions of social time as a means by which to form a common temporal understanding. Durkheim (1965, p. 30) proposes, “If men [sic]...did not have the same conception of time [social time]...all contact between their minds would be impossible, and with that, all life together.” For example, different cultures use social time to shape, define, and experience their respective concepts of the work week. In the United States, a work week is typically a five-day, 40-h week; in France, the work week is legally set to a maximum of 35 h; in Japan, a work week typically revolves around task completion and not an objective time standard; a Japanese worker may devote 50 h one week to complete his or her important requisite tasks and 60+ hours another week. Thus, although all cultures rely upon objective time to measure the hours in a work week, cultures differ markedly in their interpretation and experience of that work week. This phenomenon poignantly captures the idea that cultures differentially experience social time, a key subjective time dimension.

Interplay among the referents Figure 1 also illustrates the interplay among the referents of time. Consider temporal structuring, for example. *Temporal structuring* reflects the notion that the perception and experience of subjective

time dimensions by individuals and organizations are embedded within larger systems not necessarily within their direct control (Orlikowski and Yates 2002). Orlikowski and Yates explain that employees exert influence over subjective time norms within an organization, and that the shared temporal experiences of employees mold the temporal norms of their host organizations. However, because employees instinctively and routinely draw upon these temporal norms, they appear to be given and invariant, and repeated use of organizational temporal structures by its employees reinforces the structures' legitimacy and influence. Figure 1 illustrates these interplays by showing that each specific referent category (represented by circles) can and does interact with other referent categories.

The interactions that occur between individuals and organizations refer to the processes of how organizations' subjective time norms impact individual members' experiences of subjective time dimensions and how the individuals who constitute the organization impact the organization's subjective time dimension norms. Ballard and Seibold (2006) discuss several ways that employees experience time within a firm, such as temporal orientation, pace, and scheduling, and show that employees' experiences of time impact and are impacted by organizational forces, such as organizational norms, occupational norms, and product lifecycle.

The interactions between individuals, organizations, and cultures are the processes by which cultural patterns impact these entities' experiences of subjective time dimensions, as well as the processes by which these entities influence subjective time as experienced by the culture. Kaufman-Scarborough (2006, p. 65) suggests that "All social acts are fitted within other larger social acts; thus, the acts of individuals fit within...the norms of culture. This is called time embeddedness." Hofstede (2003) finds that individuals from highly future-oriented cultures, such as China, differ from individuals from less future-oriented cultures, such as the United States; individuals from future-oriented cultures are generally persistent and less focused on leisure activities, whereas individuals from short-term oriented cultures generally expect quick results and focus more on leisure. Similarly, Ballard and Seibold (2006) argue that monochronic organizations are more prevalent within monochronic cultures, while polychronic organizations are more prevalent within polychronic cultures.

RP₅: Subjective time perceptions, use styles, and thinking of subjective time take place at different levels of aggregation, which we call referents, individual, organizational, and cultural; perceptions and experiences for each referent are a result of the interplay of the different referents that are involved.

Influence three: The effects of context

Unlike objective time, subjective time is heavily influenced by its external environment, which we label as "context" in Fig. 1. Drawing from interdisciplinary work, including marketing, that shows numerous individual and external factors (e.g., social, cultural) influence our experience of time (Cotte et al. 2004), we propose that there are at least five contextual factors that influence subjective time perception and the use and thought of subjective time.

These five contextual factors include situational influences, individual influences, social setting, organizational influences, and cultural influences. The first, situational influences, has yielded several important insights about how context influences subjective time perception. This line of work demonstrates that subjective time perception is malleable, and is affected by a variety of situational factors, including: background music (Kellaris and Kent 1992), physical surroundings and temperatures (Baker and Cameron 1996), cardinal direction and vertical position (e.g., north is up) (Nelson and Simmons 2009), and distance travelled away from home versus returning to home (Raghubir et al. 2011). Second, individual characteristics such as age influence subjective time perceptions. Usunier and Valette-Florence (2007) find that older individuals are less future oriented than younger individuals, and Wittmann and Lehnhoff (2005) find that the perceived passage of time speeds up with age. The third factor, social setting, has been shown to influence subjective time perceptions (Baker and Cameron 1996; Hornik 1982); for instance, Baker and Cameron (1996) suggest that social context may reduce perceived waiting time if the presence of others increases positive affect. The fourth factor, organizational context, such as occupations and industries, can generate unique temporal norms including types of work associated with speed (e.g., trading stocks) (Bailey 2018). For example, Arndt et al. (2006) find that organizational context influences the use and thought of subjective time; specifically, a fit between polychronicity and work contexts with multiple task demands improves employee performance levels and job-related attitudes (Arndt et al. 2006). Finally, the fifth factor, cultural influences, has been shown to affect subjective time; Salmon et al. (2016) show that cultures differ with respect to subjective time perception and other types of subjective time such as polychronicity and temporal orientation.

We recognize that there are likely to be additional contextual factors that affect subjective time, but we believe that the five factors depicted in Fig. 1 are among the more important. Research suggests that these factors influence subjective time in the following important ways: by positively influencing mood and affect, by filling time so that it is not wasted, and by creating temporal norms. For instance, Hornik (1993) demonstrates that mood influences subjective time perception – individuals in a positive mode state tend to underestimate time

whereas those in a negative mood state overestimate duration; thus, mood may help explain why situational influences affect subjective time perceptions (Hornik 1993; Hornik and Zakay 1996).

RP₆: Context will affect subjective time perception and the use styles and thinking of subjective time or affect relationships among objective time, subjective time perception and outcomes.

A key take-away from this work combined with the idea that time concepts such as duration have both objective and subjective qualities is that exploring dimensions of subjective time in marketing management is likely to yield novel insights. For instance, Usunier and Valette-Florence (2007) discuss the importance of time in a service context and contrast how studying objective time and subjective time perceptions could foster two options on how to increase customer satisfaction through a reduction of waiting time. From an objective-time point-of-view, marketing managers could focus on efficiency and structural changes that reduce the objective wait time. From a subjective-time-perception point-of-view, marketing managers could alter the situational context (e.g., play music, display videos) as a means to reduce the subjective perception of wait time.

Summary

In sum, the field of marketing – similar to management and other disciplines – has considered objective time as the de facto standard for how time is conceptualized and studied (Bluedorn 2002; Graham 1981; Lee and Liebenau 1999). The marketing management domain has largely focused on the study of objective time while practically ignoring the study of subjective time. Further, and despite the recognition of socio-cultural influences, most of the marketing research that has studied subjective time has been conducted in the consumer behavior domain and has been focused on individual referents (e.g., subjective time perception).

Incorporating subjective time into marketing research widens the study of time and invites marketing scholars to explore differential time-based perceptions and experiences among individuals, organizations and cultures. Indeed, a review of the few subjective time articles in marketing offers convincing evidence that a more complex and holistic view of time is relevant to both marketing management and consumer behavior (Arndt et al. 2006; Cotte et al. 2004; Graham 1981; Kaufman et al. 1991; Yadav et al. 2007). Yet, if the marketing field continues to overemphasize objective time and ignore subjective time, marketing researchers risk overlooking many important potential insights. According to Cotte et al. (2004, p. 333), focusing exclusively on one single type of time (e.g., objective time) has “likely hindered the growth of more in

depth knowledge of timestyles and their interrelations with consumer [and marketing management] behavior.” In this context, timestyles are akin to our conceptual framework of time, and relate to ways to focus on time (e.g., the inclusion of both subjective time and subjective time dimensions). Hence, while scholars should not abandon the study of objective time, they should be making concerted efforts to include the study of subjective time.

Our conceptualization of time (Fig. 1) moves temporal research in marketing beyond the study of objective time by specifically introducing the first alternative temporal framework that provides new ways to conceptualize time, and aiding in the understanding of the complex nature of time (Bluedorn 2002). Overall, it provides a structure with which to explore research opportunities in the field of marketing with a particular focus on objective and subjective time as experienced by different individual, organizational, and cultural referents. Figure 1 illustrates that objective time, subjective time, and referent perspective constitute a view of time divergent from the predominantly-held clock view of time. Beyond comparing dimensions of subjective time and objective time, Fig. 1 illustrates the interplay between: 1) objective time and subjective time; and 2) referents of time represented by overlapping circles.

General discussion

This manuscript advances the understanding of time in marketing research, noting that, while the objective treatment of time in marketing remains unquestionably valuable, a singular focus on this approach is insufficient in modern marketing. In this paper, we present a grounded theory review and propose a conceptual framework of time. These complementary outputs provide the theoretical underpinnings for examining time in marketing in terms of interaction among multiple referent perspectives in dynamic temporal exchanges. Thus, this manuscript aids in advancing time related marketing research by highlighting that, while objective time is an important construct in marketing research and practice, careful and systematic consideration of subjective time will strengthen future time-based work in marketing.

While subjective time has been acknowledged in some previous marketing research, it has not yet been incorporated into meaningful and applicable temporal frameworks. Based on our review findings and examination of gaps, we advance the view that time is a fluid concept that can be: 1) objective (the principal focus of both marketing management and consumer behavior research); 2) subjective (rarely discussed in the marketing management literature and, to a lesser extent, the consumer behavior literature); or 3) some combination of both – which as noted above, should be based on which referent perspective(s) and situational factors are considered.

Connecting our conceptual framework of time with existing marketing theory, we identify three categories of referents: 1) individual, 2) organization, and 3) culture - all of which can exist in isolation or in combination, and all of which can be influenced by internal or external situational factors.

We also suggest that consumer behavior and, particularly, marketing management researchers, would be well served to draw on the strengths of what we have and have not learned, based on the 850+ time-based studies that we have identified in the top-ranked marketing journals over more than seventy-five years. These foundational marketing studies emphasize that time is important across a wide range of factors, dimensions, and situations. However, this should not be surprising – noted theorists Albert Einstein and Steven Hawking both vocally advocated for the importance of time in thought. Moreover, Peter Drucker (1954), one of our most famous business theorists, reasoned that “Because the purpose of business is to create a customer, the business enterprise has two—and only two—basic functions: marketing and innovation”, two inherently temporal concepts.

The grounded theory review and conceptual framework of time proposed in this manuscript encourage the conceptualization of time in the field of marketing from dynamic, non-traditional, non-linear perspectives, serving as a foundation for the development of alternate conceptualizations of time. Along with our proposed framework of time, we also argue that it is only through the development of alternate conceptualizations and rival models that an appropriate theory of time in marketing can be developed. The result of these efforts will be the advancement of theory and practice such that time will be treated as a holistic temporal construct, and firms will treat time as a value-adding resource within their marketing mix strategies.

There are a number of potentially interesting research questions that should be very useful to practitioners as well as scholars. The use of time as a marketing tool is central to many currently disruptive firms’ business models (e.g., Amazon, Google, Warby Parker, Rent the Runway), and, in the future, is likely to be a key predictor of firm innovativeness, firm disruptiveness potential, firm customer-centricity focus, and improved firm performance. The marketing field is changing at an ever-increasing rate and based on this recognition, we see the task of understanding how marketers use subjective time to represent several future research opportunities. For example, we ask: *how do marketers incorporate and leverage time in their marketing activities and how do industrial and consumer buyers respond?* For example, to what degree are marketers using subjective time in marketing activities such as temporal messaging? Correspondingly, how has this usage affected their firm performance? Do they, and, if so, how do they use time-related strategies in new product development, channels, pricing, and promotional activities? For instance, Antes and Mumford (2009) demonstrate that time pressures

interact with temporal orientation to determine the effectiveness of creative problem-solving; a past orientation under time pressure is beneficial for creative problem-solving. This line of work could be extended by addressing how perceived time pressure impacts new product development, innovation, and sales cycles. Having a framework against which to test and extend existing empirical findings should be most useful.

Anecdotal evidence suggests that savvy marketers are placing increased emphasis on the incorporation of time-related factors within their strategic, tactical, and marketing communication efforts. For example, many companies in the financial and insurance services sectors use *key event and social time* to influence consumers’ *subjective time perception*, as well as to effectively convey their product and brand messaging. Perhaps no financial and insurance sector company has done this as well as Prudential, which for the past several years has made Harvard Social Psychologist, Dan Gilbert, the face of their personal retirement services offerings. Within Prudential’s commercial spots, the company’s product and brand messaging routinely discusses critical social time and event elements, such as key family events, stage within the family life cycle, time until retirement, target retirement dates, post-retirement life expectancy, etc. This temporally focused marketing strategy has aided Prudential in accelerating the development of awareness and meaning with scores of people who were not initially aware of, or interested in, the company’s retirement offerings. Consequently, individually and collectively across firms’ brand building, measurement and management perspectives, it is important to identify the key classifications, influences and outcomes associated with the incorporation of subjective time in modern marketing.

Neighboring disciplines, such as management, have shown that a singular focus on objective time may overlook valuable insights revealed by more multifaceted notions of time (Ancona et al. 2001a; Lee and Liebenau 1999; Mosakowski and Earley 2000; Orlikowski and Yates 2002; Shipp et al. 2009). Traditionally, management and organizational behavior focused on objective time (Mosakowski and Earley 2000), despite calls to integrate other variations of time (Ancona et al. 2001a; Bluedorn and Denhardt 1988; Das 1991). However, these fields are overcoming this limitation; subjective time is now more accepted in both fields (Ancona et al. 2001a; Mosakowski and Earley 2000; Orlikowski and Yates 2002). This increased attention is evidenced by books and special journal issues on temporal research (e.g., the *Academy of Management Review* special issue on time, October 2001; Dansereau and Yammarino 2005) and development of time-based frameworks (e.g., Ballard and Seibold 2003).

Similarly, we formally bring the notion of subjective time into marketing, and review the marketing literature that has discussed time and illuminate how little there is that has used subjective time and what those few examples focus on, in addition to proposing emerging research questions. There

are three key aspects that distinguish our work from previous inter-disciplinary research related to time (Das and Teng 1997; Lee and Liebenau 1999; Mosakowski and Early 2000; Shipp et al. (2009). First, our research is one of a very few articles – for example, Lee and Liebenau (1999) – that has developed a scheme to organize and classify constructs broadly related to time-in-general and specifically related to objective time and subjective time. Relatedly, our second distinguishing feature is that our conceptual framework is unique in proposing a dynamic relationship between objective time, subjective time, and context. Third, our framework is unique in that it makes a distinction among referents of time in addition to highlighting the interplay among referents. Overall, we provide several contributions related to marketing and inter-disciplinary time-based research.

Within this paper we advance the first alternative temporal framework, but our framework should be viewed as only a base conceptual framework of time, and we call on the field to develop alternate temporal conceptualizations and frameworks to further marketing theory and practice. Such theoretical developments will help fuel the full reconceptualization of time in marketing and should be particularly relevant to studying and encouraging marketing innovation and disruption, factors that seem to drive modern marketing.

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