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Research paper

From transactions to journeys and beyond: The evolution of B2B buying process modeling

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"History doesn't repeat itself, but it often rhymes."
Anonymous (1970).

ABSTRACT

Consultants and pundits assert that the business-to-business (B2B) buying process has changed markedly in recent years due to the emergence of online, digital applications and software. Recognizing that impactful, and truly innovative future research is perhaps best created when built on the foundation of past science, we review the arc of B2B buying process modeling from 1956 to the present. Our goals with this research are to: 1. capture the genealogy and evolution of thinking across the years in terms of foundation theories, reasoning approach, types of models, factors researched, and journals in which articles were published, 2. identify the thematic inflection points in the research stream that have led to the current conceptualizations, and 3. suggest a research agenda for the future. We discovered that academic understanding of the B2B buying process has progressed in waves featuring seven themes – transactions, situations, influences, responses, relationships, networks and journeys. Looking to the future, we recommend that scholars examine five areas of research: the impact of technology, modes of customer and supplier interaction, decision-making approaches, tensions between internal and external communities, and B2B marketing analytics.

1. Introduction

Consultants and pundits assert that the business-to-business (B2B) purchasing process has changed markedly in recent years (Bonchek & France, 2014; Matias, 2018; Taylor, 2016). In support, they commonly give two statistics gleaned from consulting studies – B2B customers now complete 57% of the B2B buying process before they contact a supplier representative and undertake 67% of all buying tasks online (CEB Global, 2018; Gerard, 2014; Think with Google, 2013). Further, recent research by Gartner (Bryan, 2018) has found just over 80% of B2B customers even access online channels late in the purchasing process for more information. B2B customers, also, are growing in comfort and expectation of artificial intelligence that is chatbot-enabled in order to get more information faster. These trends are suggested to be shaped by the emergence and widespread usage of online, digital technologies which allow fast access to a widespread of user-directed resources. From an academic research perspective, these assertions about the influence of technology on buyer behavior offer an opportunity to give pause to consider the ways in which models of the B2B buying process have evolved over time. If B2B buying behavior is changing, has the process changed as well? Our research traces the evolution of B2B buying process models to better understand how and why models have developed, with an eye to the future.

While philosopher Santayana (1905) suggested that, "Those who cannot remember the past are condemned to repeat it," perhaps the most costly impact of not knowing or remembering the past isn't in the repetition but in the loss of innovation that could have come in place of the repetition. In that spirit, we trace the evolution of over 60 years of academic research on the B2B buying process and review the arc of themes in this evolution to: 1. capture the genealogy and evolution of thinking across the years in terms of foundation theories, reasoning approach, types of models, factors researched, and journals in which articles were published, 2. identify the thematic inflection points in the research stream that have led to the current conceptualizations, and 3. suggest a research agenda for the future.

Our review of the history of the development of B2B buying process models covers the foundation and perspective of each of seven themes. We illustrate how the focus of each thematic collection of models morphed into contemporary models of today. We interpret the inflection points of B2B buying process models over time, and then offer a view of future areas of research that may emerge from the changes in the way in which buying decisions have been conceptualized. Our focus

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is to understand the progression of B2B buying process models over time. We illustrate the evolution of conceptualizations of B2B buying process models, and then share a research agenda for the future based on modern shifts in B2B buying behavior that have resulted from technological innovation.

Arguably the roots of this pursuit begin in economics with the article, "Observations of a Business Decision" (Cyert, Simon, & Trow, 1956), and in marketing with the article, "Modeling the Industrial Buying Process" (Webster Jr., 1965), with then over 113 academic marketing articles and 7 books which addressed the B2B purchasing process, its antecedents, and consequences published. The resulting manuscript and discussion provides a blueprint for understanding how knowledge and understanding in a specialized area gestates and matures over the years in the field of B2B marketing thus offer an impetus for scholars of the future to build new theory rather than unknowingly replicate and rename that of history.

2. Methodology

2.1. Literature search procedures

We define impact of an academic publication as the number of citations the publication received over the years. Our method is similar to one used by Håkansson and Gadde (2018) to evaluate four decades of research by the IMP Group. Using Business Source Premier, we searched for B2B publications using the key words, "B2B buying process", "B2B decision-making", and "B2B purchasing". Initially, we concentrated on marketing journals: *Journal of Marketing, Journal of Marketing Research, Marketing Science, Journal of the Academy of Marketing Science, Industrial Marketing Management, Journal of Business-to-Business Marketing, Journal of Business & Industrial Marketing, European Journal of Marketing,* and *International Journal of Research in Marketing*. From there, we expanded our search to include articles in other marketing, management, operations, and supply chain management journals. Then, we considered books. Throughout the process, the references for each publication, as well as the articles citing each publication were examined to search for additional publications dealing with the topic of the B2B purchasing process. All authors independently vetted each publication to ensure that each one identified contained either a complete B2B buying process model, assessments of individual stages of the B2B buying process, or examinations of the antecedents or consequences of the B2B buying process. Then the articles were examined and sorted into explanatory themes based upon type of model and the innovative concepts introduced.

2.2. Literature search outcomes

2.2.1. Most impactful models

The review of the literature resulted in 124 publications[1] including 117 articles and 7 books that appeared between 1956 and 2018. We utilized Google Scholar to acquire the citation counts for each publication. In total, these 124 publications have been cited over 34,000 times. Of the articles, 47% were published in European-based journals and 53% in North American-based journals. Of all the 124 publications involving B2B buying models and/or antecedents or consequences of the B2B buying process, 42% were published in *Industrial Marketing Management*, followed by 15% in the *Journal of Marketing*, 10% in the *Journal of Marketing Research*, 9% in the *Journal of Business & Industrial Marketing*. The remaining nearly quarter of the publications appeared in a variety of other outlets (including 5% in book form). Of the 113 academic journal articles, 56% (64 articles) were empirical in nature in that some form of data was collected. Just over half (58%) of the empirical articles used surveys to collect the data; 17% used interviews, with the remaining using a combination of surveys and interviews, experiments, secondary data, or field studies.

Next, we rank ordered the articles/books in terms of citations per year to mitigate the fact that the publications appeared at different times over a 60+ year period. In Table 1, we list the Top 30 publications in terms of citations per year. Virtually all of these publications featured a B2B buying process model and introduced new constructs into consideration. We also list the journals or books in which the top 30 publications appeared and the sources of data authors used in their research.

The three journals in which the Top 30 publications most frequently appeared were: *Journal of Marketing* (9 articles), *Industrial Marketing Management* (5), and *Harvard Business Review* (4). Four of the Top 30 publications appeared in books. The most frequently used data sources for the publications were: case studies (12), conceptualizations solely derived from reviews of the literature (6), large sample surveys (6) and interviews (4).

2.2.2. Lineage and evolution of thought

The articles were plotted based on chronology of publication to gain a sense the inflection points of the research stream. The Top 30 articles are distributed roughly equal across the 60+ year span. The authors examined each inflection point to determine if the points marked a change in the research path or aggregation/summary of the past. This procedure ties back to the fundamental motivation for the research to review and to better understand the change of thinking in the B2B purchasing process.

Additionally, the cumulative publications (124) were plotted from 1956 to 2018 to determine how B2B purchasing models were diffused over time (see Fig. 1). The citation pattern resembles a third generation diffusion model (Norton & Bass, 1987). Three of the Top 30 articles (Cyert et al., 1956; Robinson, Faris, & with Wind, 1967; Webster Jr., 1965) appear to have created impetus for the second and third generations of publications. Then, in the 1990s, the graph indicates a leveling off of the second generation of publications, with a third generation of publications beginning next. These findings will be discussed further in the results section.

Our approach to the qualitative thematic analysis focused on each of the author's independent examination of each article/book containing a buying process model specifically examining points of repetition (Ryan & Bernard, 2003). The key for the authors was to determine the central feature of the buying process model and then to see how the feature may repeat through other articles. An aspect of this process is what Ryan & Bernard (2003, p. 88) refer to as our expert "prior theoretical understanding of the phenomenon under study". As the articles and books were thoroughly and repeatedly read, natural themes, or fundamental concepts collectively explaining a group of articles, became evident.

We discovered that B2B buying process modeling progressed over the years in waves of activities directed at distinct themes. Each wave was grounded in a familiar and established theory and "stretched" or "expanded" to include an innovative, new theme (Gannett, 2018). For example, B2B buying process research can be traced back to managerial decision-making theory in economics (Cyert et al., 1956). Researchers built on that theory by investigating a critical business decision – the process of buying a B2B product or service. Each theme was investigated and modeled thoroughly and then used as the foundation for the next wave.

We uncovered 7 major themes across the 60+ years of B2B buying process research – transactions, situations, influences, responses, relationships, networks, and journeys. Each theme introduced new concepts and resulted in more expansive and thought-provoking B2B buying process models.

[1] Please contact the authors for the complete list of 124 publications.

Table 1
Top 30 B2B buying process model publications from 1958 to the present based on citations.
Source: Google Scholar as of 7 April 2018.

Rank	Author(s)	Title	Journal/book	Total citations	Citations per year	Source of insights
1	Dwyer et al. (1987)	Developing Buyer-Seller Relationships	*Journal of Marketing*	12,193	393.3	Conceptual
2	Håkansson and Snehota (1995)	Developing Relationships in Business Markets	Book	4672	203.0	Case studies
3	Håkansson (1982)	International Marketing & Purchasing of Industrial Goods	Book	3987	110.8	Case studies
4	Axelsson and Easton (1992)	Industrial Networks: A New View of Reality	Book	1374	52.0	Case studies
5	Robinson et al. (1967)	Industrial Buying & Creative Marketing	Book	1407	27.6	Case studies
6	Sheth (1973)	A Model of Industrial Buying Behavior	*Journal of Marketing*	1227	27.3	Conceptual
7	Webster Jr. and Wind (1972)	A General Model for Understanding Organizational Buying Behavior	*Journal of Marketing*	1206	26.2	Conceptual
8	Edelman and Singer (2015)	Competing on Customer Journeys	*Harvard Business Review*	74	24.7	Case studies
9	Johnston and Lewin (1996)	Organizational Buying Behavior: Toward an Integrative Frameworks	*Journal of Business Research*	498	22.6	Meta-analysis
10	Bunn (1993)	Taxonomy of Buying Decision Approaches	*Journal of Marketing*	416	16.6	Large sample survey
11	MacMillan and McGrath (1997)	Discovering New Points of Differentiation	*Harvard Business Review*	287	12.7	Interviews
12	Richardson (2010)	Using Consumer Journey Maps to Improve Customer Experience	*Harvard Business Review*	101	12.6	Conceptual
13	Anderson et al. (1987)	Industrial Purchasing: An Empirical Exploration of the Buyclass Framework	*Journal of Marketing*	356	11.5	Large sample survey
14	Anderson and Chambers (1985)	A Reward/Measurement Model of Organizational Buying Behavior	*Journal of Marketing*	298	9.0	Conceptual
15	Cyert et al. (1956)	Observations of a Business Decision	*Journal of Business*	552	6.9	Case study
16	Shapiro et al. (1992)	Staple Yourself to an Order	*Harvard Business Review*	200	7.7	Case studies
17	Day and Barksdale (2003)	Selecting a Professional Service Provider from a Short List	*Journal of Business & Industrial Management*	98	6.5	Large sample survey
18	Choffray and Lilien (1978)	Assessing Response to Industrial Marketing Strategy	*Journal of Marketing*	230	5.8	Case study
19	Vyas and Woodside (1984)	An Inductive Model of the Industrial Supplier Choice Process	*Journal of Marketing*	191	5.6	Case studies
20	Leigh and Rethans (1984)	A Script-Theoretic Analysis of Industrial Purchasing Behavior	*Journal of Marketing*	176	5.2	Large sample survey
21	Ozanne and Churchill Jr. (1971)	Five Dimensions of the Industrial Adoption Process	*Journal of Marketing Research*	199	4.2	Interviews
22	Webster Jr. (1965)	Modeling the Industrial Buying Process	*Journal of Marketing Research*	210	4.0	Interviews
23	Makkonen et al. (2012)	Organizational Buying as Muddling Through: A Practice-Theory Approach	*Journal of Business Research*	23	2.9	Case study
24	Hill (1972)	The Nature of Industrial Buying Decisions	*Industrial Marketing Management*	60	1.3	Conceptual
25	Samli et al. (1988)	International Industrial Buyer Behavior: An Exploration and Proposed Model	*Journal of the Academy of Marketing Science*	36	1.2	Delphi study
26	Bunn et al. (2001)	An Empirical Model of Professional Buyers' Search Effort	*Journal of Business-to-Business Marketing*	20	1.1	Large sample survey
27	Matthyssens and Faes (1985)	OEM Buying Process for New Components: Purchasing & Marketing Implications	*Industrial Marketing Management*	37	1.0	Case studies
28	Cardozo, 1983)	Modeling Organizational Buying as a Sequence of Decisions	*Industrial Marketing Management*	34	1.0	Case studies
29	Bellizzi (1979)	Product Type and Relative Influence of Buyers in Commercial Construction	*Industrial Marketing Management*	31	0.9	Interviews
30	Ferguson (1979)	An Evaluation of the BUYGRID Analytic Framework	*Industrial Marketing Management*	28	0.8	Large sample survey

Summary of non-book publication outlets of top 30

Publications	Number
Journal of Marketing	9
Industrial Marketing Management	5
Harvard Business Review	4
Journal of Marketing Research	2
Journal of Business Research	2
Journal of Business	1
Journal of Business-to-Business Marketing	1
Journal of Academy of Marketing Science	1
Journal of Business & Industrial Management	1

Summary of sources of insights in academic articles in the top 30

Source of insights	Number
Case studies	12
Conceptual	6
Large sample survey	6
Interviews	4
Meta-analysis	1
Delphi study	1

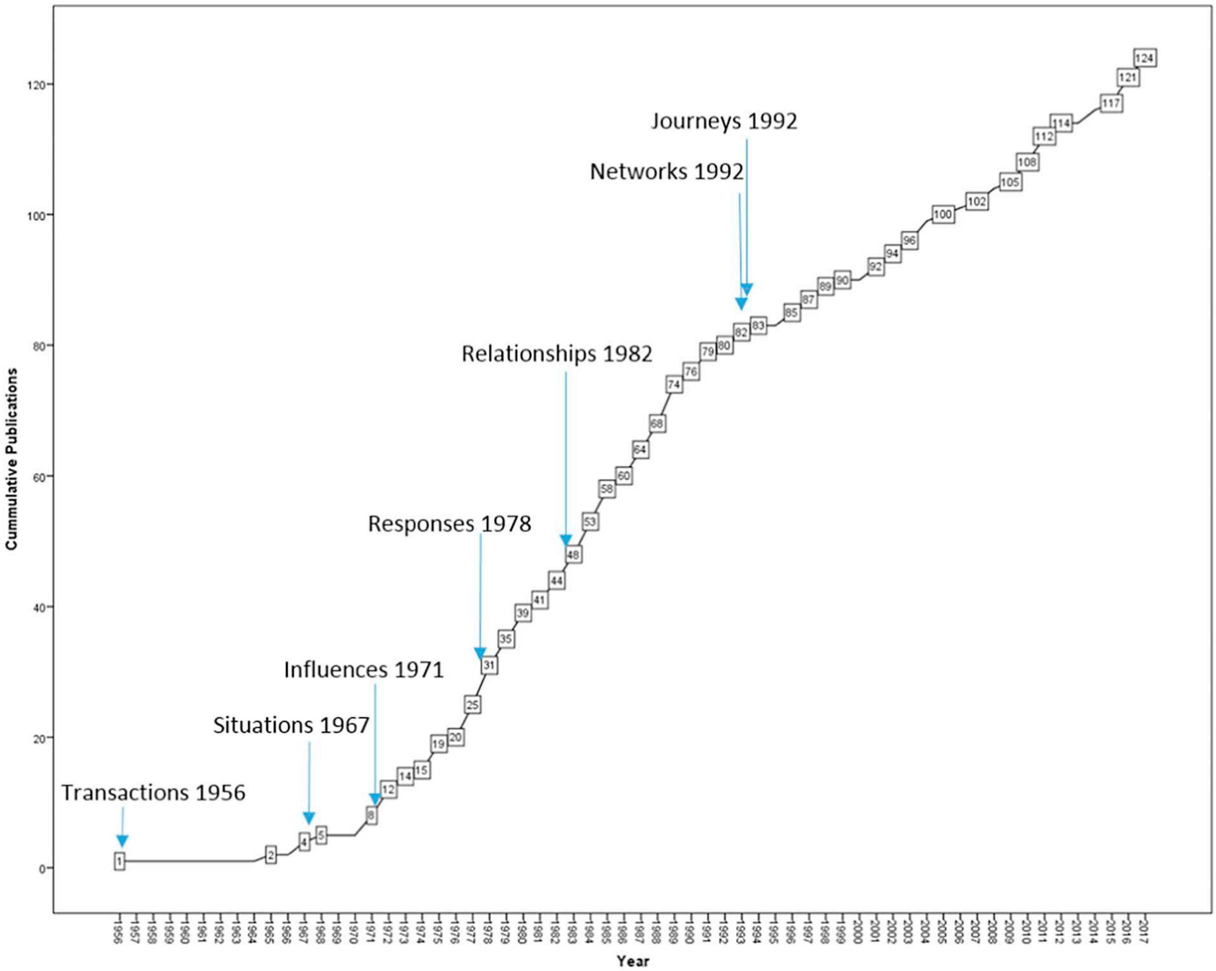

Fig. 1. Cumulative body of research on the B2B buying process over time with thematic inflection points.

3. The evolution of B2B buying process models, 1956 to the present

In this section, for each of the seven themes, we summarize its unique conceptual contributions, identify its most impactful publications, and describe noteworthy models. Additionally, we establish linkages between publications and across themes. Fig. 2 summarizes the key elements of each theme.

3.1. Transactions

Impetus for the study of B2B transactions can be traced back to the efforts of leading marketing scholars of the 1940s and 1950s (e.g., Leo Aspinwall, Reavis Cox, M.H. Halbert, John R. Howard, and Edmund McGarry) to organize marketing into a legitimate academic discipline. Prominent among these pioneering thinkers was Wroe Alderson, who is often referred to as "The Father of Modern Marketing". Alderson sought to transform marketing from a "trade" to a "science" of human behavior regarding problem-solving (Shaw & Lazer, 2007). In his view, he believed that the discipline of marketing would shift attention from "markets" to "interactions" between individuals, namely a supplier and a customer.

From Alderson's perspective, a transaction was a logical place to begin theory development as it shifted attention to interactions between suppliers and customers, drew upon behavioral sciences for understanding, and provided the foundation for the articulation of an effective marketing mix. He began by formally defining it as follows (1965, p. 75):

A transaction is a product of the double search in which customers are looking for goods and suppliers are looking for customers. It is an exchange of information leading to an agreement concerning the marketing of goods. This agreement is a joint decision in which the customer agrees to take the goods offered and the supplier agrees to sell at the stated price and terms.

Two high impact publications for the transaction theme – Cyert et al. (1956) and Webster Jr. (1965) – appeared at this time. The Cyert, Simon, & Trow research is notable in that it supported Alderson's contention that traditional economic theory did not provide a comprehensive explanation for all purchase decisions. Webster's work advanced Alderson's vision of marketing science by focusing on the transaction as the basis of conceptual frameworks and models in B2B marketing and by advocating transactional frameworks and models as the basis for the design of effective marketing mixes. As these works were groundbreaking, initial attempts at theory development, they "kept it simple," scrutinizing single transactions with no consideration of repurchase, solely from the perspective of the customer firm. Resulting models were linear, with sequential and operational steps typically beginning with the identification of a need/problem and concluding with a purchase. There were few marketing theories at the time; so, research was primarily inductive in nature, drawing upon field interviews and case studies.

Arguably, the first conceptual model of the B2B buying process devised by scholars appeared in Cyert et al. (1956). The goal of the research was to demonstrate that the "Theory of the Decision-Making Process", which was popular in economics during that era (Simon,

A Snapshot of the Evolution in Thinking

"A ***transaction*** … is a joint decision in which the customer agrees to take the goods offered and the supplier agrees to sell at the stated price and terms."
Alderson (1965)

"The ***customer journey*** is the process a customer goes through, across all stages and touch points, that makes up the customer experience"
Lemon and Verhoef (2016)

THEMES	TRANSACTIONS	SITUATIONS	INFLUENCES	RESPONSES	RELATIONSHIPS	NETWORKS	JOURNEYS
Foundation	Purchasing and marketing are grounded in economic exchange	Buying process varies by product, industry, technology, buying phases	Shift from transactions to behavioral factors affecting them	Efforts shift to supplier's perspective and designing effective marketing efforts	Dyadic interactions between customer and supplier	All relationships affecting customer and supplier firm are modeled	Online, digital technology's impact on the buying process
Perspective	Interaction between customer and supplier	The buying situation	Integrative and comprehensive models of buyer behavior	Isolate key variables affecting buying process, then prescribe marketing elements to influence	Continuum from transactional to relational exchange posited	Extent of "connectedness" of actors, resources, and activities within the network is deemed important	Digital technologies used to map and model customer journey and align marketing actions
Dominant Methodology	Inductive theory development and research based on interviews and case studies	Large sample data gathering and rigorous quantitative testing of models and hypotheses	Models deduced from behavioral sciences	Methodology shifts to multiplicative, probabilistic forecasting of the most productive allocation of marketing resources and activities	Models increasingly deduced from economic, behavioral sciences, and marketing theories	Network analyses	"Big Data" facilitates the use of marketing analytics to assess the buying process and its consequences
Focus	Steps in a single transaction	Still single transactions, but now includes how the process varies across situations	Integrative models and the influence of behavioral factors	How marketing can prompt different consequences	Evolution of relationships modeled; transactions are but one type of exchange	All parties now included in models	Multiple customer touchpoints across multiple customer journeys

Fig. 2. A snapshot of the evolution in thinking.

1955), only explained programmed decisions – those in which alternatives were specified in advance, consequences of each were known, and individuals had a hierarchy of utilities which enabled them to readily make decisions. Instead, they argued that many "real world" decisions were made under unstructured, vague, and ambiguous conditions. They called them non-programmed decisions. An important conclusion of their work was that routine, repetitive, and simple purchases entailed programmed decision-making while novel, complicated, and unstructured purchases required non-programmed decision-making. This gave rise years later to discussions on the reality companies face having both decisions that are routine as well as those for new purchases for which the company had no experience and faced high levels of uncertainty.

Nine years later, Webster Jr. (1965), presented the first, conceptual model of the B2B buying process (see Table 2). His goals were to devise a conceptual model that academics could use to isolate and rank order parameters (i.e., uncontrollable factors) and variables (i.e., under managerial control) that are critical in B2B buying decisions and that practitioners could use to guide marketing and selling activities. He proposed the four-step, single transaction, model. Among Webster's most important contributions were insights into the choice process. Webster posited that customer managers spend considerable time determining decision rules both qualitative and quantitative for making purchasing decisions. Webster's buying process model provided the foundation for future models, hinted at the importance of the buying center, and was one of the first to advocate alignment of B2B purchasing with marketing activities.

3.2. Situations

Marketing scholars quickly acknowledged that the simple, B2B buying process models initially developed could not be generalized to all purchasing situations. Instead, they argued that models should be developed to account for varying products, industries, environmental conditions, marketplaces, technologies, and timeframes (Wind & Thomas, 1996). Perhaps the first and most influential of these was the BuyGrid Model (Robinson et al., 1967, see Table 2). Model design was groundbreaking and innovative because it was both descriptive (i.e., its BuyPhases specified the steps in the buying process) and normative (i.e., its BuyClasses advocated different purchasing and marketing efforts as function of whether the situation was a repeat purchase, modified rebuy, or new task).

The BuyGrid Model has been one of the most widely tested B2B buying process models. More importantly, it marked a significant shift in research methodology from qualitative, interviews and case studies to large-sample survey data collection and quantitative, hypothesis-testing and modeling. Among the most prominent of these large-sample, quantitative research efforts are Ferguson (1979); Bellizzi and McVey (1983); Leigh and Rethans (1984); Anderson, Chu, and Weitz (1987); and Bunn (1993).

Two significant changes in research efforts emerged during this era. Utilizing the inductive theory-building approach outlined above, Vyas and Woodside (1984), directed their attention at identifying and cataloguing the decision methods that customer managers used at each stage of the buying process. Their results isolated a set of commonly employed, B2B purchasing decision rules. At the same time, Leigh and Rethans (1984), were among the first to apply a deductive research approach to the study of the B2B buying process. They grounded their conceptualization and research in script theory from social psychology (Abelson, 1976). Not only did their findings confirm the appropriateness of the BuyGrid Model, they specified the process that customer managers employ to devise cognitive scripts for various purchasing

Table 2
Exemplar B2B buying process models by theme.

3.1 Transactions	3.2 Situations	3.3 Influences
Industrial Buying Process Model Webster Jr. (1965) 1. Problem Recognition 2. Organizational Assignment of Buying Responsibility & Authority 3. Determination of Search Procedures for Identifying Product Offerings and for Establishing Selection Criteria 4. Implementation of Choice Procedures for Evaluating and Selecting Among Alternatives	*BuyGrid Model* Robinson et al. (1967) 1. Anticipation or Recognition of a Problem (Need) and a General Solution 2. Determination of Characteristics and Quantity of Needed Item 3. Description of Characteristics and Quantity of Needed Item 4. Sear for and Qualification of Potential Sources 5. Acquisition and Analysis of Proposals 6. Evaluation of Proposals and Selection of Supplier(s) 7. Selection of an Order Routine 8. Performance Feedback and Evaluation	*Model of Industrial Buyer Behavior Joint Decision-Making* Sheth (1973) 1. Initiation of the Decision to Buy 2. Gathering of Information 3. Evaluating Alternative Suppliers 4. Resolving Conflicts
3.4 Responses	**3.5 Relationships**	**3.6 Networks**
Industrial Market Response Model Choffray and Lilien (1978) 1. Evoked Set of Alternatives 2. Environmental Constraints 3. Organizational Requirements 4. Feasible Set of Alternatives 5. Formation of Individual Preferences 6. Formation of Organizational Preferences 7. Organizational Choice	*Framework for Developing Buyer-Seller Relationships* Dwyer et al. (1987) 1. Awareness 2. Exploration 3. Expansion 4. Commitment 5. Dissolution	*Model of Industrial Networks* Håkansson & Johanson (1992) 1. Actors 2. Activities 3. Resources
3.7 Journeys		
Customer Decision Journey Edelman and Singer (2015) 1. Consider 2. Evaluate 3. Buy 4. The Loyalty Loop a. Enjoy b. Advocate c. Bond 5. New Journey		

situations and decisions.

These series of papers collectively were probing, testing and extending the BuyGrid model. Among the more notable are the works of Bunn (1993, 1994). In contrast to the BuyGrid, Bunn focused on developing an empirically supported classification of situations and decisions of the buying process. Her work was conducted in the vein of creating more robust theory by incorporating both inductive and deductive approaches.

Empirical studies also identified weaknesses in the BuyGrid Model. For example, Ferguson (1979) concluded that BuyGrid did not apply to straight and modified rebuy situations for services. Rather than discard the model, scholars chose to improve the model by addressing its deficiencies. Scholars proposed modifying the model by taking such situational factors into consideration as: the importance of buying decision (e.g., Hill, 1972), product complexity (e.g., Johnston & Bonoma, 1981b), level of need uncertainty (e.g., Hillier, 1975), sudden needs versus repeat needs (e.g., Grønhaug, 1976), high technology versus low technology products (e.g., Djeflat, 1998), supplier riskiness (e.g., Hunter, Kasouf, Celuch, & Curry, 2004), face-to-face versus online purchasing (e.g., Schoenherr & Mabert, 2011), and co-opetition (e.g., Rajala & Tidström, 2017).

The BuyGrid Model contributed to the understanding of the B2B buying process by advocating a center of gravity concept, arguing that the relative importance of each BuyPhase will vary by purchase situation. They also posited that several BuyPhase steps are likely to be overlapping and interactive. These insights pre-date similar tenet's of today's customer journey modeling (Barnes & Adams, 2013). While the idea of a customer journey consists of multiple customer touchpoints and is far more than the buying process, the notions in earlier research that steps in the buying process may be dynamic and interactive planted the seed for later work on the more encompassing idea of a customer journey. The work also provided important foundational thinking for later work to investigate how the buying process might unfold, opening doors to discussion on influences on the buying process.

3.3. Influences

Whereas initial research studied steps of the B2B buying process, the next wave of academic works shifted attention toward identifying the factors that affected the process, determining how those factors were interrelated, and assessing their impact. These efforts signify an advance in the field toward a more holistic view of the buying process. Such factors examined included not only operational activities but also psychological and behavioral issues encountered by decision-makers. Characteristic of this theme, authors created integrated models that linked the impact of all these factors on the buying process. While the resulting models continued to describe single, one-product transactions presented from the view of the customer firm only, they stopped being linear and began to feature feedback and causal relationship loops. These characteristics are reflected in today's customer journey models and maps (Edelman & Singer, 2015).

Webster Jr. and Wind (1972) proposed one of the first comprehensive buying process models. They observed that traditional views of organizational buying in the marketing literature “emphasized rational, economic factors. In these economic views, the objective [task] of purchasing is to obtain the minimum price or the lowest total cost-in-use" (p. 13). Instead, they advocated that scholars consider both task and non-task variables that influence organizational buying decisions. They grouped these variables into four categories – individual, social, organizational, and environmental. Perhaps more importantly, Webster & Wind urged marketing scholars to create comprehensive, "integrated models" that captured the causal interrelationships among the legion of influencing variables.

Rather than just describing the factors at work, the authors spend considerable time speculating on their impact on the buying process. Furthermore, they used their model to offer normative guidance to sales and marketing personnel on how to positively affect each factor. Not only did Webster Jr. and Wind (1972) provide a step toward today's larger concepts of customer journey maps and alignment, the emphasis on behavioral factors presages contemporary constructs of touchpoints, customer experience, and customer engagement.

In the decades that followed, marketing scholars turned their attention to the antecedent variables that influenced the buying process while treating the transaction as an output or consequence. Among the more popular topics was the buying center, its membership, and member roles in buying decisions (e.g., Berkowitz, 1986; Crow & Lindquist, 1985; Johnston & Bonoma, 1981a; Mattson, 1988; McQuiston, 1989). Hill (1972) researched such influence agents as reasons for purchasing, novelty of purchase, product considerations, and the organization environment. Anderson and Chambers (1985) examined the impact of customer manager motivation in the form of rewards and measurement systems on purchasing behavior. Studying international trade Samli, Grewal, and Mathur (1988) argued that decisions pivoted on six influence agents – individual factors, environmental factors, organizational factors, government and regulatory factors, societal/cultural factors, and uncertainty factors. Other influence agents researched included: search effort (Bunn, Butaney, & Hoffman, 2001), environmental influences (e.g., Upah & Bird, 1980), emotions (e.g., Wolter, Bacon, Duhan, & Wilson, 1989), and organizational climate (e.g., Qualls & Puto, 1989).

This period witnessed the introduction of numerous integrated models of B2B buying behaviors (e.g., Hill, 1972; Samli et al., 1988 and Sheth, 1973). Perhaps the most noteworthy of these was Sheth (1973, see Table 2). Drawing heavily upon the behavioral sciences, Sheth posited that purchasing decisions should be assessed and predicted based upon the characteristics of individuals involved. Sheth introduced a number of new behavioral constructs to the field including conflict, negotiations, risk, and sources of information. While the Sheth and some other integrated models of the era continued to describe single, one-product transactions presented from the view of the customer firm only, they stopped being linear and began to feature feedback and causal relationship loops.

In contrast to previous research, Sheth speculated on what led to autonomous versus joint decision-making. A unique aspect of his work was the attention given to conflict that may arise during joint decision-making and recommendations on resolving conflict. Sheth emphasized the importance of supplier performance assessment. He suggested that outcomes given expectations should be a primary performance metric. He concluded by specifying how situational factors can influence the buying decision. As with Webster Jr. and Wind (1972), the Sheth Model set the stage for today's broader focus on the customer experience, touchpoints, and customer engagement.

Another notable and highly distinctive model of this time period was Ozanne and Churchill Jr. (1971). Their work contributed in three critical ways. First, it portrayed the transaction as merely one step of the larger product adoption process (Rogers, 1962). Second, it included for the first time in such models the impact of the supplier's marketing and selling efforts, indicating how suppliers might positively impact the adoption decision. Third, it implied a long-term continuous relationship between the customer and supplier firms. Importantly, their model was derived from an extensive field study of some 52 firms and quantitative analyses.

The work of Ozanne and Churchill Jr. (1971) took research on the buying process in another conceptual and normative direction. Rather than rely upon the familiar steps of the buying process outlined in previous models, the authors drew upon the diffusion and adoption of innovations literature (Rogers, 1962). According to the authors, "The industrial adoption process is nothing more than a decision process leading to the purchase of an industrial innovation" (p. 322). Importantly, the Ozanne and Churchill Jr. (1971) work was one of the first in buying process research to imply a long-term relationship between supplier and customer firms.

3.4. Responses

Beginning with Alderson (1957), marketing scholars argued that the purpose of studying the customer buying process was to determine which marketing and selling activities could be used to persuade prospects; yet, few gave operational details. Instead, they created long lists of buying factors and attempted to create integrated models of buyer behavior (Choffray & Lilien, 1978). Two distinctive and innovative articles sought to remedy this deficiency (Cardozo, 1983; Choffray & Lilien, 1978).

Both sets of researchers strove to create operational models of organizational buying which isolated key variables affecting buying decisions and then to prescribe marketing mix elements to influence them. They deduced their models from existing buying process models, namely Robinson et al. (1967); Webster Jr. and Wind (1972); and Sheth (1973). Choffray and Lilien (1978), see Table 2) constructed a model that predicted the likelihood that a customer firm will respond favorably to a supplier's marketing efforts and environmental forces. There were four submodels. An awareness model linked ongoing marketing efforts to the probability that an organization would know about a product. An acceptance model estimated the probability that the customer firm will find an offering feasible. An individual evaluation model determined the probability of whether or not a buying center member would select a product. A group decision model determined the probability that the buying center as a whole would select a given offering for purchase. Four types of modeling were applied: a weighted probability model, a proportionality model, a unanimity model, and an acceptability model. A multiplicative model summarized the models and estimated the probability that an organization will select the product.

Cardozo (1983) advanced a multiplicative, probability model designed to predict the response of a customer to a variety of marketing activities. Instead of using innovation adoption steps as the basis of the model, Cardozo explored seven decisions of the buying process. Cardozo advised marketers to determine the probability that a customer will make each decision favorably. Then, the marketer multiplied all the probabilities together. If only the first six decisions were considered, then the model predicted the probability that the customer will purchase the product. If all seven decisions were assessed, then the model predicted the probability the customer will engage in a series of purchases over time.

In contrast with previous works, these papers focused primarily on the B2B marketer's perspective. While Choffray and Lilien (1978) modeled the impact of marketing mix elements on members of the customer's buying center, Cardozo (1983) directed his model at specific customer buying process decisions. The resulting multiplicative, probability models predicted the likely customer response to a variety of B2B marketing and selling activities. Based on these forecasts, the scholars then recommended specific B2B marketing and selling strategies that would have the greatest positive impact on customers' purchase intentions. And, unlike other buying process models, these two works recommended marketing and selling actions that would yield repeat business.

3.5. Relationships

The 1980s brought a major change in the modeling of the B2B buying process. Instead of viewing single transactions, primarily from the customer perspective, B2B marketing researchers turned their attention to long-term, dyadic, working relationships between a customer firm and a supplier firm. The new thinking resulted in a torrent of innovative new conceptualizations and models as well as the utilization of rigorous quantitative analytical tools such as structural equation modeling (Anderson & Narus, 1990).

There are several key tenets of the relationship theme. First, both supplier and customer firm managers are actively involved in the buying process; thus, their actions must be modeled jointly. Second, while exchange remains at the core of models, it has been expanded to include other factors such as information, technology, financing, interaction, and promises. Third, models not only include economic considerations but also numerous concepts from the behavioral sciences such as dependence, trust, commitment, cooperation, conflict, satisfaction, sharing, communications, and reciprocity, among many others. Fourth, a wide variety of customer and supplier working relationships are possible ranging from one-time, discrete transactions to long-term, complex collaborations, partnerships, and joint ventures. Thus, each customer and supplier relationship has its own unique characteristics and operations.

Three papers published during this period have been highly influential – Håkansson (1982), Dwyer, Schurr, and Oh (1987), and Johnston and Lewin (1996). In a provocative book that summarized a lengthy field study, Håkansson (1982) challenged the established "marketing management approach" and proposed a new paradigm for marketing activities called the "Interaction Model". At its core was the supplier and customer working relationship. It was surrounded by an "atmosphere" comprised of behavioral factors such as dependence, cooperation, conflict, expectations, and closeness. In turn, the atmosphere was enclosed in an "environment" which entailed market dynamics, international affairs, social systems, and channels. Håkansson (1982) argued that B2B buying behavior should be modeled around interactions among all these factors.

Håkansson (1982) summarized the findings of the first Industrial Marketing and Purchasing (IMP) Group Study which ran from 1976 to 1982 and involved researchers from five countries in Europe. The impetus for the project was dissatisfaction with existing models of organizational behavior. The researchers cited four deficiencies with previous approaches. First, they challenged the notion that product purchases should be treated as isolated events. Instead, they argued that transactions were episodes in continuing relationships between as supplier and customer. Second, they disputed the notion that one player was active (usually the marketer implementing a marketing mix), while the other was passive (usually the customer). Rather, they posited that both sides were actively involved in the process through a series of interactions. Third, they contended that buyers and suppliers did not change relationships often with speed and ease; but, sought relatively stable, market structures and interaction patterns. Finally, IMP scholars argued that understanding the nature of a buyer-seller relationship could not come from studying one side of the buying process in isolation. To the contrary, understanding relationships required an assessment of the activities of both sides of the dyad simultaneously.

The innovative and provocative model that emerged from the IMP Project was referred to as the interaction model. The model, in contrast to most of the earlier models, was constructed using both inductive reasoning (i.e., personal interviews and case studies) and deductive reasoning (i.e., drawing extensively upon New Institutional Economic Theory, Inter-Organizational Studies, Social Exchange, and Network Analysis). At its core is the primary unit of analysis – the relationship. This is a significant evolution from the earliest models which focused on a transaction or a particular setting. The relationship is comprised of a dyad of actors – supplier firm and customer firm, as well as their respective personnel – that interact over time. In contrast with previous research, IMP scholars argued that social exchanges were often more important than economic transactions. The dyad was immediately surrounded by an atmosphere which encompassed relational dynamics associated with the power-dependence relationship, the state of conflict or cooperation, mutual expectations, and degree of closeness between the companies and their personnel. In turn, a dyad was imbedded in the environment. Key environmental factors that influence networks included market structure, dynamism, internationalization, position in the manufacturing channel, and social systems. Håkansson argued that in order to understand organizational behavior, analysts must investigate the interactions among all these factors.

Heavily influenced by the works of Macneil (1978), Arndt (1979), and Jackson (1985), Dwyer et al. (1987) proposed a radical departure from traditional B2B buying process models (see Table 2). They suggested that a variety of exchange formats were possible ranging from transactional (i.e., simple one time exchange of money for a product) to relational (i.e., long-term business characterized by complex, personal, and non-economic social exchange, mutual dependence, collaboration, and constructive conflict resolution). In relational exchange, transactions were administered over a long period rather than agreed to on a one-time basis.

Drawing on Social Exchange Theory (Scanzoni, 1979; Thibaut & Kelley, 1959), they posited that all relationships evolve through these five phases over time – awareness, exploration, expansion, commitment, and dissolution. These phases mirrored both the industrial adoption process (Ozanne & Churchill Jr., 1971) and customer response hierarchy models (Kotler & Keller, 2012, p. 481). In the articulation of their framework, Dwyer, Schurr, and Oh introduced a myriad of new concepts and processes to the buying process.

As with Håkansson (1982), the unit of analysis in the framework is the relational dyad (i.e., supplier and customer firms) and the start of relationship begins with any type of interaction during the awareness phase. Dwyer et al. (1987) postulated that the exploration phase is comprised of five subprocesses – attraction, communication and bargaining, development and exercise and power, norm development, and expectation development. They described expansion as being a period of continuous increases in mutual benefits and growing interdependence. In contrast to discrete, one-time transactions, the authors introduced the notion of increasing commitment or a pledge of relational continuity between the partners. And, they contended that commitment could be observed and measured in terms of relationship inputs, durability, and consistency. Finally, they stated that eventually most relationships ended through the process of dissolution or gradual withdrawal and disengagement from exchanges.

In 1996, the time seemed ripe for an assessment of the progress of the body of research. Johnston and Lewin (1996) is noteworthy for its analytical prowess. The authors conducted a meticulous meta-analysis of the first twenty-five years of buying process modeling and constructed two models. The first, an "Integrated Model of Buying Behavior", mirrored the Sheth (1973) model but contained constructs and interrelationships that the meta-analysis demonstrated were significant. The second, "Buyer-Seller Communications Network Model", drew upon constructs identified in their research. Finally, Johnston and Lewin (1996) created a "Risk Continuum" which predicted the consequences of various collaborative relationship efforts.

Johnston and Lewin (1996) examined 25 years of research on organizational buying behavior (i.e., 1967 through 1996) that appeared in six leading marketing journals (i.e., 165 articles). They did so in order to identify important findings and constructs and to develop an integrated model of organizational buying behavior. Focusing on three classic models (i.e., Robinson et al., 1967; Sheth, 1973; Webster Jr. & Wind, 1972), they identified nine constructs affecting buying behavior – environmental, organizational, group, participant, purchase, seller, conflict/negotiation, informational, and process – that appeared consistently in all three models and were supported by empirical research over the 25 year period. To these, Johnston and Lewin added two intrafirm constructs – decision rules and role stress – and two interfirm constructs – buyer-seller relationships and communication networks.

Perhaps the most unique contribution of Johnston and Lewin (1996) was the attention they give to risk management as exemplified in their Risk Continuum. Their continuum ranged from low to high purchase risk. Based upon their research, they predicted that as the risks associated with organizational purchasing increase that a host of other factors change as well. These changes include: the buying center will become larger, participants in the decision will be more educated and experienced, sellers with proven products will be favored, information search will be wider and more active, conflicts within the buying center will increase, decision rules will become firm specific, and role stress will increase. The Johnston and Lewin Risk Continuum ranged from low to high purchase related risk. The dimensions of the continuum included: buying center organization (simple versus complex), relationships (weak versus strong), decision rules (informal versus formal), information search (minimal versus active), networks (simple versus complex), and negotiations (minimum versus substantial).

3.6. Networks

During the late 1980s and early 1990s, marketing scholars imbedded their conceptualizations of the buying process into the even broader concept of a "network". Researchers argued that any dyadic relationship between a customer firm and a supplier firm was comprised of and influenced by a multitude of relationships not only among individuals within the two firms but also with other third parties such as second and third tier suppliers, intermediaries, consulting and advertising agencies, financial institutions, governments, and professional peers in other organizations, among many others. Thus, they defined a network as the aggregation of all relationships affecting a customer and supplier dyad. Conceptualizing the buying process within the context of networks further enabled marketing scholars to important network theory and network analysis methodologies from the social sciences (Iacobucci & Hopkins, 1992). Two publications on networks stand out as the most impactful, Axelsson & Easton, 1992) and "Håkansson and Snehota (1995).

Håkansson and Johanson introduce the network concept in a section of the Axelsson & Easton, 1992) book in what they refer to as the Actors, Resources, and Activities (ARA) Model (see Table 2). This model has become the focal point of IMP research over the past 26 years. Its aim was to "make possible an integrated analysis of stability and development in industry" (p. 29). The article posits that network structure can be attributed to three variables: actors, resources and activities. *Actors* are individuals, groups of individuals, parts of firms, firms, and groups of firms. They control activities within a network. *Activities* are processes whereby "actors combine, develop, exchange, or create resources by utilizing other resources" (p. 30). *Resources* are items of value controlled by the actors and consumed or modified via activities. They posit that all conceptualizations of B2B buying behavior must account for these three factors. Most notably, they return to the concept of "transactions" which is rebranded as activities. Håkansson and Johanson argue that our understanding of transactions must expand beyond the exchange of goods for money to include all exchanges between actors within a network.

The second book, "Developing Relationships in Business Networks", Håkansson and Snehota (1995), further developed the network construct. Most importantly, they introduce the central concept of "connectedness" to capture the degree of closeness between actors within the network. Its premise is that all dyadic relationships between customers and suppliers are impacted by other relationships among the actors. They advance the concept of *connectedness* to capture all of these linkages. In the process, they posit that: 1. the role, development, and performance of companies will be explained by their ability to develop relationships, 2. resource development takes place between companies, 3. efficiencies in the performance of internal activities are dependent upon supplier and customer relationships, and 4. the more successful that network partners are the more successful the firm will be. Transactions of various types characterize connectedness at the episodic, interaction level.

The network approach laid the foundation for today's conceptualizations of online, digital purchasing and marketing. Most importantly, the approach portends the importance of professional communities and their influence on purchasing decisions, long-term relationships, and customer loyalty. From a practical standpoint, they provide a theoretical explanation for and managerial guidance regarding such innovative, online efforts as communities, review sites, viral marketing, and crowdsourcing.

3.7. Journeys

Due to the accelerated development and implementation of online, digital purchasing and marketing technologies in the modern era, pundits and scholars have directed considerable attention to re-examining the purchasing process in hopes of determining if and how it has changed. Much of this work has been published in management practice articles and consulting reports. To this point, consumer products have been the focus of research; however, B2B scholars have begun to make headway. Immediately detectable in contemporary publications is a seemingly different lexicon of terms. Some of these terms are in fact old (e.g., the customer experience), while others are relatively new (e.g., customer engagement). Importantly, definitions of these terms vary widely from author to author and little formal standardization has occurred. However, it is possible to trace their origins.

To begin with, scholars have embraced Alderson's (1965) call to include theories from the behavioral sciences in modeling as most terms have both economic and behavioral components. Customer journey, or "the process a customer goes through, across all stages and touch points, that makes up the customer experience" (Lemon & Verhoef, 2016, p. 71), for example, has the transaction at its core. However, it has been expanded to include aspects of past buying process themes – situations, influences, relationships, and networks. Customer experience and engagement capture critical aspects of the network and relationship themes. Community reflects the impact of research on networks. A customer journey is not a restatement of the buying process, but rather a conceptualization of a much more intricate and involved process by which a customer and supplier may embark that incorporates all of the experiential elements of the interactions and their flow over multiple time periods.

Today's consultants and researchers routinely employ the inductive theory-building approach that Robinson et al. (1967) advocated. While the steps in the process remain basically the same, pundits have rebranded the terminology. For example, buying process maps are now called customer journey maps and buying process models are referred to as customer journey models to reflect the inclusion of behavioral considerations from the situations, influences, relationships, and networks themes. And, prescriptions for matching marketing efforts to buying process steps are now referred to *aligning*. Technology has made the mapping, modeling, and aligning processes easier to implement and far more accurate due to the widespread availability of "Big Data" on purchasing behaviors and commercially available software and systems such as Google Analytics®, Microsoft Visio®, and IBM Journey Designer®.

While academics and practitioners emphasize work done after 2010, many of the concepts and terminology can be traced back to the 1990s (Lemon & Verhoef, 2016). Several highly impactful publications on the journey theme stand out. Shapiro, Rangan, and Sviokla (1992) reintroduced the practice of mapping the operational steps in the customer's buying process while MacMillan and McGrath (1997) demonstrated how to use mapping to align marketing efforts with the customer's experience. Richardson (2010) articulated the practice of customer journey mapping and Edelman and Singer (2015) advocated customer journey modeling.

Arising from the operations management literature, Shapiro et al. (1992) explored “why orders fell through the cracks”. Drawing upon the techniques of the business process reengineering movement, which were popular in operations at that time, the authors argued that managers should begin by charting the order management cycle and identifying responsibilities for the completion of each task. Viewing the process as part of a dyadic relationship, the authors next urged managers to map customer activities and experiences during the process. They argued that at many firms while managers handled operational tasks, no one was in charge of managing the customer's experience. As a remedy, they proposed placing a manager in charge of the entire order fulfilling process and redesigning or reengineering the tasks to improve the customer's experience. Importantly, they recognized that dealing with customers was not just the task of marketing and selling but cut across many functions within a supplier firm and demanded oversight from senior managers.

In MacMillan and McGrath's (1997) work on points of differentiation, they argued that competitive advantage can be found at each point of contact with the customer. To do so, they urged managers to map the consumption chain for each customer segment and then to analyze the customer's experience at each touchpoint. A consumption chain flowchart captured all actions the customer undertook from gaining awareness, searching for acceptable suppliers and solutions, ordering and purchasing the product, receiving and using the product, acquiring repair services, disposing or recycling the product, and reordering. At each touchpoint or interaction in the consumption chain, the authors advised suppliers to evaluate the customer's experience in terms of people, places, occasions, and activities; and then, to reengineer the entire process to make it more amenable and satisfying for the customer. Such improvements, the authors' claimed, would enable the supplier firm to differentiate itself from competitors.

Translating the concepts of the previous two works in to contemporary parlance, Richardson (2010), urged marketers to create a diagram that illustrated the steps the customer goes through in engaging with a supplier company from “cradle to grave”. Based upon the diagram, supplier managers can then improve each step and add value to each interaction or touchpoint. Expanding upon these insights, Rawson, Duncan, and Jones (2013) proposed specific actions that supplier firms can take to improve customer journeys.

At the conceptual level, Edelman and Singer (2015) presented the McKinsey Customer Journey Model (see Table 2). In contrast with previous works that implied that marketers could only respond passively to customer-specified buying processes, Edelman and Singer (2015) advocated that marketers proactively lead customers on their journey. They did so by using digital automation, proactive personalization, contextual interaction, and journey innovation to design a customer journey that was easy for the customer to follow and provided advantages over competitive suppliers. They also argued that supplier firms should create the position of journey product manager to guide the customer through the process. Toman, Adamson, and Gomez (2017) proposed that the key to doing so was to design customer journeys that make it easier for customers to buy. Finally, in another conceptual model Barnes and Adams (2013) state that customer journeys were comprised of activity streams (i.e., explore, evaluate, engage, and experience) that were ongoing rather than occurring at discrete points in time and that overlapped rather than being sequential.

It should be noted that the inflection point for this theme suggests that the research on customer journeys is an ongoing phenomenon. To that point, most of the early work in this area related consulting experiences in management practice publications. The more recent focus has been in academic outlets. (See for example the recent 2019 Special Issue on Customer Journeys in the *Journal of the Academy of Marketing Science.*) Now, rigorous scholarly research is examining not only the singular customer journey, but also the multiple journeys that customers may take with a single firm as well as across a portfolio of suppliers.

4. Conclusion

The research in this area started with a basic notion of the buying process. Each theme that we identified added new theoretical considerations. The fundamental elements of each theme evolved from strictly economic to more behavioral/psychological, drawing upon a wide-array of theory to explain behavior. The principle reason for this evolution is that purchasing decisions have multiple sources and timing of influence. Thus, these different perspectives and theories help marketers better understand the comprehensive nature of the buying process.

In the Transactions theme, purchasing and marketing are grounded in economic exchange, and the perspective in this theme focuses on the interaction between a customer and a supplier. In the Situations theme, the buying process shifted to vary by product, industry, technology and buying phase, in which the focus across this theme is the buying situation. A shift occurred in the Influences theme from transactions to the behavioral factors affecting the transactions. In the Responses theme, efforts shifted to the supplier's perspective and how to design effective marketing efforts to influence buyers. Dyadic interactions between the customer and supplier were the perspective of the Relationships theme, with a posited continuum from transactional to relational. In the Networks theme, all relationships affecting the customer and supplier firm were modeled. Finally, in the Journey theme, the impact of technology on the buying process was the focus, with digital technologies used to map and model the customer journey across touchpoints.

5. Research agenda for the future: what's next?

The customer journey and kindred vocabulary of digital marketing has strong roots in decades old research on the B2B buying process. However, it has only recently become the focal constructs for explaining B2B customer behavior, particularly among consultants and marketing managers. In fact, digital marketers have enhanced the language of B2B customer behavior and moved the buying process and customer behavior to the center of discussions. Our research offers insight into the roots of what has become the customer journey concept, and the development that has incorporated aspects of all the layers of past B2B buying process research that we explored.

Technological innovations have opened the doors for B2B customers to gain access to more information across the globe about suppliers and other buyers' experiences with these suppliers. Alongside these changes, the evolution of how the B2B buying process has shifted from thinking of solely a transaction to conceptualizing the process as being part of a larger focal point has been rather remarkable. Over multiple decades scholars broadened the view of the buying process that ultimately has led to modern conceptualizations of the customer purchase journey, customer experience and touch points. These conceptualizations in contemporary research walked the bridge from past research and offer next steps for the future. In addition to examining how technology may create better decisions, research is also needed to determine how technology may alter the interactions between buyers and suppliers and within the firm between purchasing professionals and internal customers.

Our analysis of the evolution of the themes in this research stream illustrate punctuated points in which research slowed and then advanced as the topic both became in favor and as technology enabled new types of connections among market players and market information. Our review of the academic literature demonstrated that past academic research has provided a sound foundation leading to today's conceptualizations of the B2B buying process and far beyond into the areas of the customer journey and ancillary routes from that concept.

Future scholarly work could be quite useful to investigate key areas that have been opened up from the rapid change in the technological environment and the growing expectations for resources in the workplace that we have as consumers. We assert that this foundation could be stretched or expanded to address five potential research areas that would benefit modern buyer-supplier relationships and overall supplier performance – the impact of technology, modes of customer and supplier interaction, decision-making approaches, tensions between internal and external communities, and B2B marketing analytics. We offer these areas as a future research agenda.

5.1. The impact of technology

Consultants claim that B2B purchasing managers complete over 67% of all buying tasks online (CEB Global, 2018; Gerard, 2014; Think with Google, 2013). Currently, there is a confusing glut of applications and software available online. The integration of artificial intelligence capabilities, for example, to enhance cognitive search or capture variability in data may actually impede the buying process without predetermined output data management expectations (SAS Institute Inc, n.d). Research should assess which digital tools B2B customer managers use, when and how they use them in the buying process, which ones are the most valuable in the buying process. Further, different customers may use distinct technology in which the supplier must adopt. Investigation is needed into how suppliers can more effectively integrate technology across a vast array of customer technology requirements.

Further, unknown is which stages of the purchasing process models that technology might more productively and effectively improve. For many companies, challenges of an overabundance of incompatible software across suppliers and internal customers makes difficult to quickly assess spend within a category much less examine opportunities for supplier development through multi-point evaluation of a supplier by all relevant internal users. Technological advances may mean that buyers and suppliers end up with a collection of unique programs that do not integrate with one another, resulting in a cumbersome and frustrating buying process. While companies such as Ariba offer end-to-end software solutions to aid with the buying process, the degree of internal coordination required to use such systems is substantial. Further research is needed on how this coordination can occur not only more effectively, but also how it may open up new opportunities for enhanced buyer-supplier relations. An overarching research question in this area is under what conditions does existing technology truly help produce better solutions rather than more complicated processes?

5.2. Modes of customer and supplier interaction

In the report, "Death of a (B2B) Salesman", Forrester Research projects that over 1 million US sales persons (primarily traditional order-takers) will lose their jobs in the coming years (Hoar, 2015). They further predict that only consultant sales persons who offer high value-added services will survive. When exploring the B2B buying process, academics should assess when purchasing managers should exclusively use online digital tools and when they should rely upon interpersonal connections (i.e., face-to-face or telephone) connections with supplier sales people. They should also confirm Forrester forecasts and speculate on the role of sales persons in the future. Further, research is needed to help determine how new-to-the-firm products alter the interest in particular modes of interactions with a supplier's sales force. New-to-firm products open up the company to risk. Unknown is whether potential buyers in these conditions will seek sales people or previous customers to help reduce this risk. Are sales people perceived as a risk-reduction vehicle in that tacit knowledge transfer can occur? Or will companies new to an area of purchase simply rely on peer firms to provide the necessary input to help avoid mistakes with a purchase?

5.3. Decision-making approaches

Pundits argue that digital technologies have changed the way in which B2B customers make purchasing decisions. Rather than conduct extensive economic, technical, and performance assessments, often via side-by-side tests, purchasing managers are increasingly relying on the recommendations of peers obtained online at professional community sites, review sites, and referral sites (Simonson & Rosen, 2014). For example, consulting research states that 53% of buyers rely on peer recommendations, 76% prioritize vendors based on such recommendations, and 84% of B2B purchases begin with a referral (Matias, 2018). Academics can contribute by assessing the extent to which traditional analyses have been replaced by peer recommendations. A key question to be answered is, "Do purchasing managers use peer recommendations to make purchasing decisions or do they use them to assemble a list of acceptable suppliers?" Further, it would be helpful to understand more about when and how online resources are used alongside, or in place of, in-person resources (such as conferences, trade association meetings, etc.). In particular, understanding the role of risk in guiding these decisions would help to better understand the usage of tools throughout the decision-making process. A dominant research question in this area is how can suppliers create breadth and depth of how their company provides superior solutions that is transparent across the value chain such that buyers can better understand the risks of the relationship?

5.4. Tension between internal and external communities

In contrast to consumers, B2B managers can draw upon both internal and external online, peer communities (Steward, Narus, & Roehm, 2018). For example, in addition to external reviews, customer firms typically have vendor scorecard systems in which all customer managers who interact with a given supplier and its product rate their experiences and share their evaluations with internal peers. The availability of two sources of reviews and evaluations creates potential tensions in terms of the accuracy and validity of conclusions. Scholars need to determine when internal versus external reviews are most useful and how customer firms can resolve differing conclusions. Further, there are questions about how and when these different forms of assessment might be used and when. Should buyers use internal scorecards, for example, for all suppliers, or only the more strategic suppliers for which the data collection efforts might be worth it? Additionally, how should a buyer treat a situation in which an incumbent supplier is negatively reviewed by other firms, but is scored favorably within his/her company? Does this signal that the buyer is obtaining, unknowingly perhaps, subpar efforts from a supplier? Further, are internal supplier scorecards and external supplier reviews used at different times in the process with different weighting of value?

5.5. B2B marketing analytics

B2B marketers lag their consumer product counterparts in terms of the effective use of marketing analytics. Marketing scholars should direct considerable attention to determine when and where analytics can be used to shepherd the alignment process. For example, Google Analytics currently provides users with single, multiple, and omni-channel (or seamless connection of customer touchpoints across channels) funnels or maps of the buying process. Single channel funnels chart visitor movements within a given website and multi-channel funnels plot movements across websites and social media sites. Omni-channel funnels diagram all points of contacts both online, in person, and through intermediaries. As the understanding of omni-channels is in its infancy, academics should direct attention at documenting customer experiences across channels at determining the influence of messaging provided from the various internal and external touchpoints. Understanding when and why potential customers interaction with an omni-channel experience better enables the supplier to understand what information might be helpful to a customer at which time during the buying process. Potential customers may enter one channel, for example, before a need and budget for that need is fully determined in an effort to keep up with industry trends. Then later in the buying process a potential customer may wish to pick up on that exploration in a different channel, without loss of the insights gained in the earlier search, when beginning to build a consideration set of suppliers. Understanding the rhythm and flow of when potential customers approach each channel enables a supplier to offer more useful, and influential, information according to customer preferences, not supplier tradition. Further, how do these different channel approaches ripple throughout the value chain?

6. Epilogue

Our overarching belief that innovative science is built on the foundation of the past guided our examination of the evolution of B2B buying models over the last 60 years. The earliest models on the B2B buying process often had an underlying implicit assumption that customer firms utilize systematic, highly structured, and analytical procedures when buying products and services. Over time, models built on this groundwork and began to determine how different situations, influences, responses, and relationships affected the buying process. Ultimately, this work has led to contemporary conceptualizations of customer journeys. In that spirit, Makkonen, Olkkonen, and Halinen (2012) recognize "…that it is practically impossible to follow a systematic and linear decision-making process in real-life organizational management" (p. 773). Instead, they advocate Simon's (1955) theory of bounded rationality in conjunction with Braybrooke and Lindblom's (1963) notion of muddling through as a more accurate depiction of buying decisions.

There is a concern about the role of person-to-person relationships in this new era. It is conceivable that B2B buying could shift to an online interface with limited, to no, human interactions. Evidence suggests that person-to-person relationships may become minimized and interdigital interactions take on a more prominent role. However, as with any phenomena, a pendulum effect to all digital interactions could very well result in digital fatigue with a return to a face-to-face working relationship model. It may in fact be time to revisit relationships in the digital period.

These approaches postulate that there is a complexity to organizational buying that typically involves incremental steps toward a decision amid intricate circumstances surrounding the organization. From this vantage point, decisions are likely to entail trial and error. Further, instead of acting rationally in a sequential manner, a buyer adjusts behaviors to the confronted situations using limited information, seeking "good enough" solutions, and solving inter-related, organizational problems simultaneously. Rather than achieving an optimal and comprehensive solution, the buyer strives to reach a satisfactory solution.

Our mapping of the evolution of academic B2B buying process models establishes the historic path of scientific development, a necessary step for continued advancement of research in this area. Additionally, we contribute by underscoring that in contemporary times, with the influx of available technology, that consumer expectations for ease in personal buying is creeping into the industrial arena. This offers new opportunities for suppliers, and in some ways necessitates that they streamline information and engage with customers in a more sophisticated manner. Suppliers must recognize the harried nature of the buying center today. There are elevated pressures for procurement and purchasing departments to become even more strategic. This means that during the buying process, suppliers must engage with buyers with more meaningful information that not only differentiates their services from competitors, but also that illustrates the lower risk of engagement and higher return from the partnership.

The thematic analysis that we present of over 60 years of scholarly work on the B2B buying process illustrates an ongoing attempt by social scientists to better explain a process rife with complexities, both internal and external to the buying firm. For firms to continue to pursue more effective strategies in the global marketplace, continued work is needed to build on this research legacy.

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