Constructing a partially formalized general theory of the marketing system: insights from the history of marketing thought

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Abstract

Purpose – The purpose of this paper is to construct a general theory of the marketing system that addresses the fundamental question: why do marketing systems occur, survive and grow?

Design/methodology/approach – The approach integrates the concepts and constructs contained in special and mid-range theories, scattered throughout the history of marketing thought, into a logically coherent set of propositions (including definitions, axioms, theorems, scientific laws, bridge laws and hypotheses) that comprise a general theory of the marketing system.

Findings – The theoretical answer to why marketing systems arise, survive and grow is because marketing systems offer the most efficient mechanism for supplying products and services that people demand, thereby increasing economic growth, compared to the opportunity costs of alternative methods of acquisition. Based on just two (of several) marketing efficiency theorems, if the input costs of trading decline (law of reduced transaction costs) and/or the output value increases (law of bulk transactions), then marketing system efficiency rises. This creates an upward spiraling cycle: increasing the extent of the market (law of market size), proliferating opportunities for increasing aggregate production efficiency (through the law of comparative advantage and the law of division of labor), thereby further proliferating opportunities for aggregate marketing system efficiency (e.g. law of central markets, law of marketing specialists), thus fueling further aggregate economic growth (until limited by the law of diminishing returns, the law of the minimum resource or the law of market size). An empirically testable central hypothesis is derived from the propositions: increasing aggregate marketing system efficiency provides both the necessary and sufficient conditions for increasing aggregate economic growth in a society.

Originality/value – The value of developing a general theory of the marketing system is to advance the marketing discipline as a social science. Additionally, a general theory is likely to enhance academic thinking, improve business practice and facilitate interaction among academicians and practitioners. Further, a general theory could also reduce disciplinary fragmentation, avoid identity confusion and lessen the credibility crisis in marketing, among others.

Keywords History of marketing thought, History of marketing theory, History of marketing ideas, Marketing systems history

Paper type Research paper

Introduction

The quest for a general theory has a long history in the literature of the marketing discipline (Alderson, 1948, 1957, 1965; Bartels, 1968, 1970; Cox and Alderson, 1948; El-Ansary, 1979; Hunt, 1971, 1983; Sheth *et al.*, 1988; Shaw, 2010, 2014). And yet, the work still remains incomplete.

Theory, according to Hunt (1976), may be defined as:

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- a logically related set of propositions (statements of relationships);
- containing some law-like generalizations and scientific laws (verified *if x, then y* propositions); and
- empirically testable (at least in principle).

Hunt (1976, p. 113) emphasizes, "the partial formalization of a theory is an absolutely necessary precondition for meaningful analysis of the theory." A general theory is an overarching theory that seeks to explain the most significant phenomena in a discipline by systematically integrating insights from the many concepts, constructs and scientific laws contained in a number of separate midrange and special theories. Simply, general theories have greater generalizability, contain more law-like propositions and scientific laws and have a higher level of abstraction than less general theories (Hunt, 1983).

Numerous marketing scholars have commented on the potential value added of developing a general theory of marketing (Alderson, 1957, 1965; Bartels, 1968, 1970; El-Ansary, 1979; Halbert, 1964; Hunt, 1983; Sheth *et al.*, 1988; etc.). These views are discussed in more detail elsewhere (Shaw, 2014), and just ten reasons are briefly mentioned here. Three reasons suggested by Alderson (1957, pp. 4-12) include:

(1) providing academics with a framework to improve thinking;

(2) providing practitioners with a guide to improve practice; and

(3) providing a theoretical bridge for academics and practitioners to communicate with each other.

Halbert (1964) believed a general theory would also (4) help policy makers design better laws and regulations. Another "useful purpose," as Hunt (1983, p. 12) observed, is (5) to provide a "road map for guiding the theoretical efforts of others" in discovering or improving theories in and of the marketing system.

"At least three reasons why the development of a general theory of marketing should be given high priority," according to Sheth *et al.* (1988, p.18), involve addressing marketing's: (6) "disciplinary fragmentation" (marketing management, consumer behavior, macromarketing, etc. are studied as independent and unrelated silos); (7) "identity confusion" (the borders of marketing have broadened and blurred from business-related market transactions to virtually all human exchanges and social relationships); and (8) "credibility crisis" (in which academic research has little relevance for business practitioners). Finally, from a social science perspective, two additional motives for a general theory were suggested by Shaw (2014, p.525): (9) to provide legitimacy for marketing as a social science because all physical, biological and social sciences are or should be built on empirically testable central theories. Also, (10) a general theory would show some progress toward achieving the ultimate goal of historical and scientific thought in marketing. While no theory or general theory is final, in an ultimate sense, it is in the process of theoretical construction toward such a goal that science progresses.

A previous literature review of general theories of marketing (Shaw, 1912) sought to establish if there existed sufficient agreement on the fundamental elements of a general theory to construct one. Among the elements evaluated were: Cox and Alderson's (1948) "basic concepts," Alderson's (1957, 1965) "elements," Bartels (1968) "sub-theories" and (1970) "meta-theoretic axioms," El-Ansary's (1979) "components," Hunt's (1983) "fundamental explananda" and Sheth *et al.*'s (1988) "ingredients." The analysis concluded: "it is indeed possible to systematically organize the essential elements and build – brick by brick – a general theory of the marketing system" (Shaw, 2014, p. 533). That is the purpose of the present research; to

construct – proposition by proposition – a partially formalized general theory of the marketing system.

Criteria for a general theory

Bartels (1970) developed a set of normative meta-theoretical criteria[1] that a general theory should satisfy. Bartels's (1970) first and most important criterion is distinct subject matter. Similarly, Hunt (1981, p. 272) concurs, ". . .the adequacy of a 'general theory' of marketing would depend on precisely delimiting the exact nature of marketing phenomena. . .". Among others, Sheth *et al.* (1988) argue that marketing's distinct subject matter is market behavior, rather than the just the study of either marketer (seller) or buyer (consumer) behavior; or other forms of social exchange behaviors. Amid marketing theorists, this is one of the fundamental points of agreement, for example:

> The "major aspect of market behavior," Alderson (1957, p. 32) notes, is "the flow of exchange transactions." Also, McInnes (1964, p. 52) observes: "The primary observable phenomenon for any theory of marketing is the hard practical fact of the market itself." According to Alderson (1965, p. 23): "A theory of marketing explains how markets work." Preston (1970, p. 1) concurs: "A market is an exchange relationship among buyers and sellers." Historically: "Marketing is a word derived from the term 'market,' observes Dixon and Wilkinson (1982, p. 1) and involves "the work which must be done so that we can transact our everyday business in markets." Finally, "because marketing takes place in markets," as Samli and Bahn (1992, p. 143) conclude, "it will be difficult to understand, let alone practice, marketing without understanding the construct of market" (Shaw, 2014, p. 529).

In sum, the distinct subject matter of a general theory of the marketing system is describing, explaining and predicting market behavior, which is the *locus* of activity for sets of sellers and buyers to transact business (see Definitions D3–D8, below).

Hunt (1983) organized the distinct subject matter of a general theory into four interrelated sub-areas:

> general theories *in* marketing would explain all the phenomena within one of the four sets of fundamental explananda [dependent variables] of marketing: the behaviors of buyers [. . .], the behaviors of sellers [. . .], the institutional framework [channel structure] directed at consummating and/or facilitating individual and ongoing exchanges, and the consequences on society of the behaviors of buyers, [. . .] sellers, and the institutional framework. A general theory *of* marketing would explain all [. . .] four (Hunt, 1983, p.16, italics in original, brackets added).

As we shall see, the unsung hero in the story of "distinct subject matter" is the seemingly mundane "market transaction" – the basic unit of analysis in marketing systems. Much maligned and taken for granted throughout history (Shaw, 2016), among all other forms of generic or social exchange the market transaction has been protected and accorded significant social-economic-commercial and legal standing (Plato's laws of the market, Magna Carta, Uniform Commercial Code, etc.). But, it is necessary to distinguish the market transaction from other forms of social exchange because, as Sheth *et al.* (1988) emphasizes:

> Not all interactions are market transactions. For an interaction to become a market transaction as opposed to a social, psychic or charitable interaction, we must limit the domain of marketing to those interactions that have clearly identified the roles of the parties to the transaction as providers (sellers) and customers (buyers). [. . .] it is the role definition of the parties [selling and buying] to an interaction *that makes it a market transaction* (Sheth *et al.*, 1988, pp.193-194, italics in original, brackets added).

For constructing a theory of the marketing system, the selling and buying roles in creating market transactions is crucial, and no other form of social or generic exchange will do

because all other forms of exchange are conceptually and measurement contaminated or deficient (Shaw, 2010, 2014). Conceptually, in contrast to generic exchange (Kotler, 1972), as Alderson (1965, p. 83) emphasized: "The transaction is a fundamental building block [. . .] for a more rigorous type of marketing theory." For empirical testing, a not "incidental advantage," that Homans (1958, p. 598) observed, is that a market transaction contains "a most useful built-in numerical measure of value." Unlike almost all other social and generic exchanges measured on ordinal assumed interval scales, an individual marketing transaction is measured in money on a true ratio scale and may be summed in a variety of ways and to various levels of aggregation (Shaw, 2010).

Other meta-theoretical criteria include: the general theory should contain the sub-areas of marketing, basic concepts should be related to marketing's distinct subject matter and the general theory should involve a hierarchical sub-division of basic concepts (Bartels, 1970). These three criteria appear satisfied by Hunt's (1983) four explananda (dependent variables). Similarly, El-Ansary (1979) included sellers, buyers, channels and social impacts as components of a general theory. For Sheth *et al.* (1988), the basic unit of analysis of a general theory is a market transaction; for El-Ansary (1979), it is a channel system. Alderson (1958, 1965) described a hierarchy of marketing systems with three levels of analysis. He regarded the fundamental unit of analysis at a micro level as the market transaction; interrelated transactions build, at a micro-macro marketing system level, to the channel-transvection; and at the macromarketing system level, as Alderson (1965, p. 93, brackets added) noted: "the sum of all [channel-] transvections correspond to an exhaustive description of the [aggregate] marketing process."

Another criterion involves independent concepts/variables used to explain and predict dependent concepts/variables (Bartels, 1970). In marketing systems, as in systems in general, from micro to macro, inputs (independent variables) are processed into outputs (dependent variables) by behavior systems. The goal of these interactions among behavior systems is to "create value" by bridging gaps in the market (Alderson, 1965; McInnes, 1964; Sheth *et al.*, 1988) and matching a seller's small quantity of supply with a buyer's small quantity of demand in a marketing transaction (Alderson, 1965) up to matching the aggregate supply and aggregate demand of the macromarketing process (Shaw, 1912; Cox and Alderson, 1948). It should be noted that a marketing transaction in and of itself creates value. "Each of the two parties to an exchange aims to get, and as a rule does get, something that is more valuable to him than what he gives" (George,1898/1941, p. 331); thus, *cet. par.*, a marketing transaction creates value. This matching process of sellers with buyers is of critical importance because, as Alderson (1958, p. 19) argued, "potentially the cost of transactions is so high that controlling or reducing this cost is a major objective in market analysis" or in developing a general theory.

The purpose of any theory in science is to explain the answer to "why" questions, as Hunt (2002, p. 85) simplifies it: "Why did phenomena X occur? Phenomena X occurred because [. . .]".

Ultimately, the most fundamental "why" question addressed by a general theory is: why do marketing systems occur, survive and grow? The hypothetical answer proposed by numerous marketing scholars (Shaw, 1912; Clark, 1922; Bartels, 1968; Breyer, 1934, 1949; McInnes, 1964; Alderson, 1965; Fisk, 1967; Dixon, 1979) is that marketing systems develop, survive and grow because they are more efficient compared to alternative economic mechanisms in producing and distributing products and services.

But even if true, the theorist must still explain: why and how marketing systems are more efficient. Further, merely claiming greater efficiency has critics as well as supporters. The question of efficiency remains an unresolved issue in the marketing literature. It has

largely gone unnoticed because of the disciplinary shift of focus from macromarketing, in the 1960s and 1970s, to a micro view of marketing management and consumer behavior (Shaw and Jones, 2005). But, the issue of marketing efficiency caused considerable consternation and even confusion to marketing scholars over many decades of the discipline's history because of the intractability of resolving whether marketing was too costly or costly enough and evaluating if marketing performed efficiently or was wastefully inefficient (Sevin *et al.*, 1951; Smith, 1965). It has been argued both ways. In an influential book (*Does Distribution Cost Too Much?*), the authors concluded: "it costs too much to distribute goods and services and modern methods of marketing are wasteful and inefficient" (Stewart and Dewhurst, 1939, p. 3). There were numerous rejoinders arguing the opposite view – that marketing was indeed productive and not wasteful or too costly (Beckman, 1940; Converse, 1940; Engle, 1940, 1941; Alderson, 1941; Huegy, 1941; Phillips, 1941; Vaile, 1941, etc.). One article asked, "Does distribution cost enough?" (Mazur, 1947). But, questions of marketing costs and productivity were never fully resolved (Heskett, 1965; Sevin, 1965), only lost or ignored.

Questions of the macromarketing system costs and productivity can only be resolved by empirical evidence. Some evidence was available, but absent is a theoretical framework the data could be – and would be – interpreted as either confirming or disconfirming whether marketing costs too much (Shaw, 1990, p. 285). Beyond costs, even the empirical evidence of retail firms' marketing efficiency is open to question because the current theoretical framework of marketing includes firm selling activities but excludes household buying activities (Alderson, 1965; Bucklin, 1978; Grabner and Layton, 1973). This omission of consumer purchasing was regarded as so negligent that it was emphasized in the title of several articles (Bender's, 1964) "Consumer-purchasing costs—Do retailers recognize them?" and Kotler and Levy's (1973) "Buying is marketing too!"). Obviously, to the extent marketing functions are shifted from business firms to household buyers, as in self-service, for example, then any apparent increase in efficiency may represent little more than a transfer of work from the measured business firm sector of the marketing system to the unmeasured household sector (Shaw, 1990). Thus, developing a general theory that integrates these critical elements of the marketing system (firms and households selling and buying to create market transactions and channel transvections) should help resolve the fundamental question of why marketing systems exist and persist.

The remaining organization of this paper starts with a brief explanatory sketch of the general theory, followed by a more formal statement of the definitions, axioms and theorems comprising the general theory. Then hypotheses are derived from the bridge laws of the theory, and lastly, the conclusions that can be drawn from this study asserted, along with its limitations and directions for future research, particularly measurement and empirical testing.

Explanatory sketch of the general theory

This section provides a rudimentary explanatory sketch or overview of the general theory of the marketing system that is detailed in the formal propositions that follow (A = Axiom, T = Theorems). If individuals desire something (A1, A2, A3, T2), then they are motivated to get it (A4) using their available resources (A5). Individuals have limited resources relative to their virtually unlimited desires (A6). People form groups (T11) because they expect to accomplish more or achieve greater satisfaction (T1) of their wants (T2), working together than they could through isolated individual activity. Within groups, individuals have different abilities, skills and other resources (T3a-f). These differences result in people having a comparative advantage (T12) in some activities relative to other people. This

comparative advantage leads to a division of labor (T13a) because of the efficiencies created in producing products and services. That is, total output for the group (T13a) increases compared to the opportunity cost (T9) alternative of individuals working independently. A division of labor also results in people producing surpluses of one or a few things in which they specialize and having deficiencies of almost everything else they want to consume (T13b). Given a division of labor, then there must be exchange (T16).

As the division of labor separates makers (producers) and users (consumers), discrepancies or gaps appear in the market (T26). Producers and consumers exist at different locations (T27d), have (supply) and want (demand) products and services at different times (T27c), in different quantities (T27b) and have different perceptions of value (T27f), among others. To overcome these gaps requires work (T29). Work takes time and effort, and time and effort have an opportunity cost (T9). This offers openings for middlemen (T33) to specialize in the exchange process and more efficiently fill these gaps (T32, T35) than the alternative of producers and consumers interacting directly (T34). Two critical pillars of efficiency produced by marketing specialists include the law of reduced transaction costs (T35) and the law of bulk transactions (T36). The former reduces the input costs of marketing activities (T35), on the one hand, while the latter increases the output value of market transactions (T36), on the other. The interaction of these two laws creates the powerful synergistic efficiency of the marketing process (T37). Thus, indirect market exchange through middlemen specialists is more efficient (T33, T35, T36) than the opportunity cost (T9) of producers and consumers in direct exchange (T34).

In sum, marketing systems emerge and grow in societies (T37, T38, T39) because of efficiency (T37) and opportunity costs (T9). Compared to any other alternative means (T6a-d) known to history (Shaw, 1995, 2016, among many others), a division of labor in production is the most efficient social means for producing things people want (T13a, T22), and a division of labor in exchange is the most efficient social means for getting (distributing) things to them (T13a, T22, T33). Thus, the hypothesis: aggregate marketing system efficiency is both a necessary and sufficient condition for aggregate economic growth.

Propositions for a general theory of the marketing systems

In contrast to the incompleteness inherent in an explanatory sketch, the general theory is detailed, step by step, in propositional format because partial formalization is important for understanding and analysis of theory (Hunt, 1976; Hunt *et al.*, 1981). The following propositions contain several types of statements (e.g. definitions, axioms, theorems and hypotheses). Definitions describe a term's conceptual meaning. Axioms are fundamental propositions of the theory assumed to be true, at least for analytical purposes. Theorems are propositions deduced from axioms or other theorems. Some theorems relate concepts categorically in a non-causal way. Other theorems are causal relating independent or input variables (designated *x*) and dependent or output variables (designated *y*). Causal theorems are necessary or sufficient or both. A *necessary condition* states that if an input does not occur, then no outcome will follow (if no *x*, then no *y*); or in the absence of the input then no output. A *sufficient condition* states that if an input does occur, then an output will follow (if *x*, then *y*); or the presence of the input itself will produce the output. Some theorems consist of well-verified and accepted empirical laws, which could be considered "Principles" in Hunt's (2002, p.161) "Hierarchy of Laws" and are here referred to as the "Law of . . .." Other causal propositions are less well-verified empirical generalizations that remain to be tested. Bridge laws link theorems to hypotheses (Hunt, 2002). Finally, hypotheses are those

particular propositions derived from the bridge laws of the general theory that are subjected to empirical testing.

In determining the validity of these laws, there are two caveats to bear in mind. First, when considering law-like generalizations in the social sciences, it is frequently the case that many factors interact simultaneously. To isolate a particular variable, one of the social scientists most useful analytical tools bears the Latin name *ceteris paribus* (meaning: all other things being equal) abbreviated *cet. par.* The *cet. par.* condition means that only the variable under consideration is examined, while all other extraneous variables are assumed to be held constant. Of course, in reality, they are neither extraneous nor constant but only deemed so for purposes of analysis. For example, the law of demand states that if price falls, then quantity of a product demanded rises. Implied is the *cet. par.* condition because other extraneous variables (income, substitute product prices, etc.) might muddle the effect of the variable under consideration – the effect of price (x) on quantity (y). For instance, if an individual's income declines significantly and the product price falls only slightly, then the quantity demanded is likely to decrease rather than increase. The contradictory result occurs, in this case, because the large income effect overwhelms the small price effect. Thus, for analytical purposes, to isolate the impact of one variable on another, the *cet. par.* condition is assumed.

The second caveat is that laws in the social sciences are probabilistic explanations of phenomena (Hunt, 2002). That is, statistically valid as a central tendency or on average but with some dispersion around a mean. Deviations from the norm represent exceptions to the law because the social sciences deal with human behavior and some behavior is abnormal. This is also true in the physical sciences, but to a lesser extent. Physicists cannot predict the position and velocity of a single atom, for example, but they can accurately predict the conditions holding for large numbers of atoms. Similarly, a law may not hold for the activity of any single individual person, household, firm or channel but does hold for large numbers of them; and as the sample size approaches the population, the higher the likelihood the phenomena will follow the law. This effect is known as the law of large numbers and is illustrative of the laws that follow: if there are a large number of trials, then the average of their values (i.e. sample mean) is very likely to approach their actual (theoretical or expected) value. These two caveats are important to keep in mind when considering possible exceptions to the laws discussed below.

Definitions

- *D1*: A system is defined as a set of interrelated elements that form a unified whole to achieve a goal (Shaw, 2009). Systems operate through a process that transforms inputs into outputs.
- *D2*: A behavior system is one in which the elements are people operating individually or in groups; particularly households in buying for consumption and firms in selling for profit (Alderson, 1957).
- *D3*: A marketing system is defined as the set of interacting firms and households that engage in selling and buying activities to achieve market transactions and channel-transvections (Alderson, 1965; Shaw, 2014).
- *D4*: Selling activities involve offering a supply of products and/or services. Pre-sale activities include identifying and satisfying demand (targeting customers, creating a marketing mix). Post-sale activities include delivery, providing support, servicing warrantees, reducing dissonance and generally keeping customers happy for repeat purchases and positive word-of-mouth (Shaw, 2014).

- *D5*: Buying activities involve accepting terms and paying for products or services demanded. Pre-purchase activities include, for example, identifying and satisfying sources of supply (e.g. prompt payment). Post-purchase activities include, for instance, transport, assembly, maintenance, consuming and disposal activities (Shaw, 2014).
- *D6*: A market transaction is defined as a voluntary agreement (offer and acceptance) between a seller and a buyer creating legal obligations for rendering products and/or services in return for money (Shaw, 1995).
- *D7*: A channel-transvection is defined as the set of market transactions from the original seller of raw materials through intermediate purchases and sales, including all sorts and transformations, to the final buyer of a finished product or service (Alderson, 1965; Shaw, 2014).
- *D8*: A macromarketing system is defined as the set of all channel-transvections (i.e. matching aggregate supply with aggregate demand), starting, in-process or ending, in a given time (e.g. a year) at a given place (e.g. the USA) (Alderson, 1965).
- *D9*: Productivity (or efficiency) is conceptually defined as a measure of process throughput or how well the process of a system transforms inputs (resources, costs) into output (actual results or benefits). Productivity is operationally defined as ratio of outputs divided by inputs. (Although these terms are generally defined synonymously in the marketing and social sciences literature, a practice followed here; see Shaw, 2009 on the distinction between efficiency, productivity and other performance criteria.)
- D10: Effectiveness is conceptually defined as the degree of a system's goal attainment. Effectiveness is operationally defined as a ratio of outputs (actual results or benefits) divided by goals (desired results or benefits) (Shaw, 2009).

Axioms

- *A1*: Needs equal basic human requirements (e.g. physiological, safety and security, social, esteem, self-actualization, loosely along the lines of Maslow's hierarchy). "Basic needs are [...] hereditary" (Maslow, 1954, p. 88). That is, needs are biologically determined, coded into the DNA of the species and genetically transmitted from one generation to the next.
- *A2*: Wants equal needs plus information (about what is available in the environment to satisfy needs). Wants are culturally determined; people need food, and different cultures have alternative means of satisfying their wants. For example, some cultures eat hot dogs and hamburgers, others insects and grubs. Wants are learned from past experiences (one's own experiences or the example of others) plus the ability to imagine or anticipate the future.
- *A3*: Demand equals wants plus purchasing power. In addition to culture, demand is also economically determined. Demand includes the financial ability to provide a quid pro quo to acquire a product/service supply.
- *A4*: A significant difference between a behavior system's (individual or groups) desired state (outcome, want, demand, goal, etc.) and their actual state motivates behavior to reduce the discrepancy (Maslow, 1943, 1954; Vroom, 1964).

- *A5*: To achieve their desired state, behavior systems operate through goal-seeking, resource transforming input–output processes (Shaw, 2009).
- *A6*: Resources (inputs) are limited relative to desires (outcomes, benefits, goals, etc.).
- *A7*: Individuals (or groups) make decisions and engage in behaviors to satisfy desires (solve problems, achieve goals, etc.).
- *A8*: Decision-making is an individual's (or group's) choice among alternative behaviors to satisfy desires (solve problems, achieve goals, etc.).
- *A9*: Decisions create expectations.
- *A10*: Expectations are an individual's (or group's) probability estimate of the behavioral results/consequences of making a decision.
- *A11*: Behavior is individual (or group) activity occupying time (Alderson, 1965).
- *A12*: Behavior creates realizations.
- *A13*: Realization (or realized behavior) is an individual's (or group's) actual results, outcomes, consequences of performing an activity.

Theorems

- *T1*: Law of satisfaction/dissatisfaction: If realization (A13) equals or exceeds expectations (A10), then individual desires are likely to be satisfied. Alternatively, if realization (T13) is less than expectations (A10), then individual desires are likely to be dissatisfied. The degree of satisfaction or dissatisfaction, however, varies per individual (Lewin, 1936; Engel *et al.*, 1968; Howard and Sheth, 1969) [2], and satisfaction is subject to marginal diminishing utility (Marshall, 1920).
- *T2*: Law of motivation: If individuals (and/or groups) desire things (A4) (food, clothing, shelter, friendship, respect, etc.), then they use their resources to try to get them (Maslow, 1943, 1954; Vroom, 1964).
- *T3*: Individual (and/or group) resources include (Shaw, 1985):
  - ability (physical and mental skills, talents);
  - motivation (effort, energy);
  - information (about themselves, their capital and the environment);
  - time (usually the minimum resource, see T15);
  - natural resources (available in the environment); and
  - capital resources acquired over time (including: technology, tools, money, product assortments, social networks, etc.).
- *T4*: Law of effect and law of habit formation (Thorndike, 1905, p. 166): These two laws are based on two factors: "pleasurable results and frequency."
  - Law of effect: If a behavior provides satisfactory results, then it is likely to be repeated frequently; and
  - Law of habit: If a behavior is frequently repeated, then it is likely to become a habit.
  - If a behavior provides dissatisfactory results, then it is likely to be avoided or stopped because it is dysfunctional (see T5c).

- *T5*: There are two types of normal behavior; other behavior is abnormal (Alderson, 1965):
  - Congenial or consumption behavior is an end result or goal that is expected to directly satisfy wants.
  - Instrumental behavior is a means to an end result or goal (e.g. employment, shopping, home production); it is not intended to directly satisfy wants, although the behavior may (or may not) provide intrinsic satisfaction.
  - Abnormal behavior is dysfunctional because it is neither a means to an end nor an end in itself.
- *T6*: Individuals (and groups) mobilize their resources to acquire the things they want through four types of mostly instrumental behavior (Kotler, 1972):
  - Self-producing things they want.
  - Taking things they want from others, (i.e. stealing, plunder, war).
  - Requesting things they want from others (i.e. charity, begging, NGO and government largess).
  - Trading things they have in exchange for things they want from others.
- *T7*: Societies operate through three exchange mechanisms (Polanyi, 1957):
  - Reciprocity: traditional or gift giving (i.e. reciprocal giving and receiving); exchanges that are congenial and voluntary with the terms of exchange left unspecified.
  - Redistribution: authority-driven, a central authority (e.g. chief, leader, government) collects (e.g. taxes) and disperses (e.g. food, public roads). Authority-driven exchanges are involuntary with the terms specified on the collection side; mostly voluntary and unspecified on the dispersal side and instrumental to both sides of the exchange.
  - Trading: commercial exchanges that are instrumental and voluntary with the terms of exchange specified.
- *T8*: There are two types of commercial exchanges (Shaw, 1995):
  - barter, in which products/services are exchanged for other products/services; and
  - market transactions, in which products/services are exchanged for money.
- *T9*: Law of opportunity costs (Bastiat,1850/1996; von Wieser,1914/1927): All behavior has a cost, at a minimum, the opportunity foregone or the cost of the next best alternative.
- *T10*: Law of least effort (Zipf, 1949): If there are two or more alternative behaviors to achieve a goal, then individuals are likely to choose the more efficient behavior.
- *T11*: Law of cooperation or voluntary associations (Plato cited in Shaw, 1995; Homans, 1957): If individuals expect they can satisfy their wants more efficiently through group activity rather than through individual activity, then they will form or join groups.
- *T12*: Law of comparative advantage (Plato cited in Shaw, 1995; Ricardo,1817/1912): If individuals (or groups) have differences in resources, then they have a comparative advantage in some activities relative to others.
- *T13a*: Law of the division of labor (Plato cited in Shaw, 1995; Smith,1776/1937): If individuals (or groups) employ a division of labor in activities where they have a

comparative advantage, then their output increases (i.e. they become more efficient) relative to self-producing all the things they want.

- *T13b*: Corollary of the division of labor (Plato cited in Shaw, 1995; Smith,1776/1937): If individuals (or groups) employ a division of labor where they have a comparative advantage, then in all areas where an individual does not self-produce, there is a deficiency of things that are wanted.
- *T14*: Law of diminishing returns (Marshall, 1920): If a variable input (e.g. people) is added to a fixed input (e.g. machines on a factory floor), then output will increase up to a point and then decline when each additional variable input yields diminishing output (returns). That is, productivity will increase up to the point of bottlenecks, causing diminishing returns and decline.
- *T15*: Law of the minimum resource (von Liebig,1840/1942): If resources are limited, then growth of outputs (efficiency) is limited by the scarcest resource – not the total amount of resources (T3a-f, T23a-g).
- *T16*: Interaction of the law of division of labor (T13a) and law of exchange (T17): If there is a division of labor, then there must be exchange (Smith,1776/1937). That is, exchange arises out of considerations of efficiency in production from the division of labor as well as efficiency in the exchange process itself.
- *T17*: Law of market transactions (Alderson, 1965): If the cost of trade is less than the opportunity cost of self-production, and other means of acquisition (T6), then individuals (or groups) will trade their surplus for things in which they are deficient because it takes less effort (T10) than producing or acquiring everything for oneself.
- *T18*: Law of market size (or the extent of the market, Smith,1776/1937): If there is a division of labor (T13a), then it is limited by the size of the market. That is, small markets (small demand) limit the division of labor, whereas large markets (great demand) expand it.
- *T19*: There are two primary groups interacting in marketing systems (Alderson, 1957):
  - Households are primary customers of products and services.
  - Firms are primary suppliers of products and suppliers. Firm demand for products and services is derived from household demand (Clark, 1922; Converse, 1921).
  - Essentially, the marketing system involves buyers and sellers interacting in a "double search process in which customers are looking for goods and suppliers are looking for customers [. . .] [with the goal of] a joint decision [. . .] [in which] customers agree to take the goods offered and suppliers agree to sell at the stated price and terms [i.e. a market transaction]" (Alderson, 1965, p. 75, brackets added).
- *T20*: Households engage in four sets of input–output behavioral processes (Shaw and Pirog, 1997):
  - employment activities that input resources (T3) to produce the output of income;
  - purchasing activities that input income (and other resources, T3) to produce the output of product and service assortments;
  - home-production activities that input product and service assortments (and other resources, T3) to produce the output of sensory characteristics.; and

  - consuming activities that input sensory characteristics (and other resources, T3) to produce the output of satisfaction (or satisfactory experiences).

- *T21*: If households are heterogeneous (i.e. have differences in desires, tastes, incomes, locations and uses for products), then market segments will exist based on differing demand functions (Robinson, 1933; Alderson, 1965).
- *T22*: If the division of labor results in shifting operations from the household to business firms, then it is because of efficiencies of scale (T10, T12, T13a,) and opportunity costs (T9).
- *T23*: Firm resources include (Hunt, 2002):
  - financial (e.g. cash, credit);
  - physical (e.g. plant, equipment);
  - legal (e.g. trademarks, patents);
  - organization (e.g. culture, policies);
  - information (e.g. knowledge of customers and competitors, industry trends);
  - relationships (e.g. suppliers, competitors, government agencies); and
  - human (see T3a-f).
- *T24*: Law of market competition (or resource advantage theory, Hunt, 2002; Hunt and Morgan, 1995): If a firm has a competitive advantage in some resource(s) (T23; i.e. heterogeneity of supply, Chamberlin, 1933; Alderson, 1965), then it has a competitive advantage in some market segment(s) and thereby achieves superior financial performance.
- *T25*: Firms are organized around sets of input–output behavioral processes:
  - purchasing activities to acquire resources;
  - production/service activities that input resources to produce the output of products and/or services;
  - marketing/merchandising/selling activities that input products and/or services (and other resources) to produce the output of sales revenue; and
  - management/administration/coordination activities that input sales revenue (and the cost of resources) to produce the output of profits.
- *T26*: If household consumption activities become separated (T22) from firm production activities (because of the efficiencies created by the division of labor), then discrepancies (gaps or separations) appear in the market between original producers (farmers, manufacturers, etc.) and final household consumers (Alderson, 1965; Breyer, 1934; McInnes, 1964; Shaw, 1912; Vaile *et al.*, 1952).
- *T27*: Market discrepancies (separations or gaps) include:
  - discrepancy of possession/ownership: sellers have a supply, buyers have a demand;
  - discrepancy of assortment/quantity: producers typically make large quantities of one or a few things, customers want a small quantity of a wide assortment of things;
  - discrepancies of time: some things are produced seasonally, but buyers want them year around (e.g. oranges). Other things are produced year around but buyers want them seasonally (e.g. Christmas bulbs);

  - discrepancies of place: Some things are produced in one or a few locations, customers exist at many locations;
  - discrepancies of information/perception: Sellers have to know what buyers want, and when and where to find them; buyers have to know what sellers have, and when and where to find them (see T19c "double search"); and
  - Discrepancies of valuation: Seller prices have to satisfy minimum costs (T25d); buyer payments have to satisfy minimum benefits (A1, A2, A3).
- *T28*: Law of marketing activities (McInnes, 1964; Alderson, 1965): If gaps are created in the market (by the division of labor, T13), then bridging these gaps requires marketing activity; and if the amount of work increases (irrespective of efficiencies), then so do the costs. (See T9: All work has a cost, at a minimum the opportunity forgone.)
- *T29*: Law of parallel marketing activities (Aspinwall, 1958): The flow of information, products and services through a channel-transvection is directly proportional to the household buyer's replacement rate and inversely proportional to the buyer's time required for purchase, consumer's time involved in consumption, seller's value added and seller's amount of product or service adjustment (customization) required.
  - If products have high replacement rates, then they are likely to follow long channels (e.g. manufacturer-wholesaler-retailer-household) and broadcast promotion (e.g. advertising).
  - If products have low replacement rates, then they are likely to follow direct channels (e.g. manufacturer-household) and direct promotion (e.g. salesforce).
- *T30*: Law of maximum marketing system efficiency or interaction of the law of division of labor (T13a) with the law of diminishing returns (T14), law of the minimum resource (T15) and the law of market size (T18): The upper limit for increasing output resulting from the division of labor (T13a) is the scarcest input (T15) or the extent of the market (T18) because further division of labor creates bottlenecks, resulting in diminishing returns (T14) and is therefore less efficient.
- *T31*: Law of seller and buyer matching (Alderson, 1957): If households' exhibit heterogeneity of demand (T21) and firms' heterogeneity of supply (T24), then buyers and sellers are not matched randomly as occurs in pure competition, nor by coercion as occurs in monopoly, but according to their preferences as occurs in market competition (T24).
- *T32*: Law of central markets (Alderson, 1957): If an individual travels to one central place to get many things, then costs are less than traveling to many places to get one or a few things.
- *T33*: Law of marketing specialists (or middlemen) (Alderson, 1957): If a marketing specialist can acquire the surplus from a number of producers and create a central market (T32), then the costs of trade for all individuals (i.e. total systems costs) can be reduced, even including profit for the trader. Exchange through middlemen (T17) arises out of considerations of efficiency from the division of labor (T13a) in the exchange process (T17) itself.
- *T34*: Law of increased transaction costs (Alderson, 1954): If the number of sellers (S) and/or buyers (B) increase in direct trade, without a middleman, then the costs of

trading (searching, traveling and negotiating, etc.) increases geometrically (transaction costs = $\sum$(S × B)).

- *T35*: Law of reduced transaction costs (Alderson, 1954): If the number of sellers (S) and/or buyers (B) increase in indirect trade, with a middleman (MM), then the total costs of trading (searching, traveling and negotiating, etc.) increases arithmetically (transaction costs = $\sum$(S + B)) and total marketing system costs (MSC) decline. Algebraically, MSC + 0MM = $\sum$(S × B costs) > MSC + MM = $\sum$(S + B costs) + (MM costs + profit).
- *T36*: Law of Bulk Transactions (Florence, 1933): If transaction size increases, then trading costs (searching, travelling and negotiating, etc.) rise less than proportionally. (For example, it takes less than ten times the work to sell a $100,000 insurance policy than a $10,000 policy, and it takes less than six times the effort to buy a six-pack than a single unit.)
- *T37*: Law of marketing system efficiency (or interaction of the law of reduced transaction costs with the law of bulk transactions (Dixon and Wilkinson, 1982; Shaw, 1985, 2010; Shaw and Dixon, 1980): If the costs of trading (e.g. searching, traveling and negotiation) are reduced (T35) while simultaneously increasing transaction value (T36), then marketing system efficiency increases geometrically.
- *T38*: Law of marketing's integration into social systems (Plato, cited in Shaw, 1995): If a marketing system exists, then society will create commercial laws (e.g. Plato's laws of the market, Magna Carta, Uniform Commercial Code) regulating private property and contract rights.
- *T39*: Law of evolutionary systems (Malthus,1798/2008; Darwin,1859/1958): If a system exhibits competition among the elements for limited resources, then those individuals (groups or institutions) most effective and efficient at either adapting their requirements to the environment or adapting the environment to their requirements will survive and grow, while those least able will fail or die and disappear.

Bridge laws

If marketing systems occur, survive and grow, then it is because marketing systems offer the most efficient mechanism (T32, T33, T35, T36, T37, T39) for supplying and distributing products and services that people demand compared to the opportunity cost (T9) of alternative methods of acquiring products and services (T6). From the law of marketing system efficiency (T37), it follows: if the input costs of trading decline (T35) and/or the output value increases (T36), then marketing system efficiency rises (T37), which, in turn, creates an upward spiraling cycle: increasing the extent of the market (law of market size (T18); proliferating opportunities for increasing aggregate production efficiency (through the law of comparative advantage (T12) and the law of division of labor (13a), thereby further proliferating opportunities for aggregate marketing system efficiency (T32, T33, T35, T36), thus fueling further aggregate economic growth (up to the limits of whichever occurs first among the law of diminishing returns (T14), law of the minimum resource (T15) or the law of the market size (T18).

Hypotheses

Composite hypothesis: Aggregate marketing system efficiency is a necessary and sufficient condition for aggregate economic growth in a society.

Sufficiency hypothesis (*if x, then y*): If aggregate marketing system efficiency increases, then aggregate economic growth in a society will increase more than proportionately.

Necessary hypothesis (*if no x, then no y*): If aggregate marketing system efficiency does not increase or declines, then aggregate economic growth in a society will not increase or will decline more than proportionately.

Conclusion

The purpose of this research was to construct a partially formalized general theory of the marketing system that addresses the question: why do marketing systems, occur, survive and grow? The process was to transform the insights found in the historical literature into propositions (including definitions, axioms, theorems, bridge laws and hypotheses) that constitute a general theory of the marketing system.

The answer to the question of why marketing systems occur, survive and grow is because a marketing system offers the most efficient means for supplying and distributing products and services that people demand relative to the opportunity cost of alternative methods for acquiring products and services. From the law of marketing system efficiency (T37), it follows: If the input costs of trading decline (T35) and/or the output value increases (T36), then marketing system efficiency rises (T37), which, in turn, creates a virtuous cycle: increasing the extent of the market (law of market size (T18); proliferating opportunities for increasing aggregate production efficiency (through the law of comparative advantage (T12) and the law of division of labor (13a), thereby further proliferating opportunities for aggregate marketing system efficiency (T32, T33, T35, T36), thus fueling further aggregate economic growth (up to the limits of whichever occurs first among the law of diminishing returns (T14), law of the minimum resource (T15) or the law of the market size (T18). In sum: increasing aggregate marketing system efficiency is a necessary and sufficient condition for increasing aggregate economic growth.

Limitations

It was previously noted that no general theory is final in an ultimate sense; it is more of a work-in-progress. But, it is in the process of developing and improving theoretical constructions that science progresses. Many more propositions could be added for further clarification and explication of the general theory, particularly for explaining firms cooperating with other firms in channel-transvections and competing with other firms to complete market transactions with household customers. Many other important concepts could also be included, such as sorts and transformations (Alderson, 1965); customer target segments and marketing mixes (Borden, 1958; Oxenfeldt, 1958); the various classifications expanded, such as individual and group resources (Shaw, 1985); and other concepts, constructs and propositions developed or improved.

Directions for future research

A partially formalized general theory has been proposed, and the next step is validation through empirically testing the theory's hypotheses. Almost all studies of firm marketing productivity are based on value added (output) per labor hour (input) (Shaw, 1990). Because the marketing system consists of firms and households (Alderson, 1941; Bucklin, 1978; Cox and Alderson, 1948; Grabner and Layton, 1973; Shaw, 1990), it is necessary to find a comparable measure of household purchasing efficiency and integrate it with firm marketing efficiency.

Measures of marketing system inputs and outputs for firms and households have been formulated (Alderson, 1948), extensively critiqued (Black and Houston, 1950; Bucklin, 1978;

Narver and Savitt, 1971; Shaw, 1990; Vaile *et al.*, 1952) and revised into a formula to measure the productivity of the macromarketing system (Shaw, 2010). In summary, the macromarketing system efficiency formula consists of the ratio of aggregate household purchasing productivity (output) divided by aggregate firm marketing productivity (input). Each side of the macromarketing system formula contains a sub-formula, for households and firms, with an input–output ratio.

The household purchasing productivity formula consists of the ratio of retail–household transaction value (output) divided by household purchasing time (input). The household purchasing productivity formula is divided by the firm marketing productivity formula. The firm marketing productivity consists of the ratio of marketing value added (output) divided by firm marketing labor hours (input). A full exposition of the formulas for firm marketing efficiency, household purchasing efficiency and aggregate marketing system efficiency are detailed elsewhere (Shaw, 2010). Essentially, the formulas measure seller and buyer activities in creating retail–household transactions, as elements of channel-transvections, which aggregated provides an "exhaustive description of the marketing process" (Alderson, 1965, p. 92) of a society.

Semantically, the macromarketing system formula asserts that an increase in the efficiency of the aggregate marketing system, assuming that firm marketing efficiency is held constant (*cet. par.)*, varies directly with total household purchases in the market and inversely with the cost of household shopping inputs to acquire the product and service assortments demanded (Shaw, 2010). Similarly, an increase in the efficiency of the aggregate marketing system, assuming that household purchasing efficiency is held constant (*cet. par.)*, varies directly with total marketing value added by firms and inversely with the total marketing labor hours to supply product and services (Shaw, 2010). Further, if firm marketing efficiency (inputs) increases, then household purchasing efficiency (output) is hypothesized to increase more than proportionally, and macromarketing system efficiency rises. That is, in the aggregate, if firms provide more value added output relative to labor inputs, then households acquire a greater quantity and/or a better quality of products and service outputs, and/or expend less purchasing time inputs to buy them. It remains to apply the relevant data to the formulas to measure macromarketing system efficiency and empirically test if aggregate marketing system efficiency is a necessary and sufficient condition for economic growth – the rationale proposed by the general theory for why marketing systems arise, survive and grow.

Notes

1. Although Bartels called his meta-theoretical rules "axioms," the term meta-theoretical "criteria" appears more apt. Axioms are propositions assumed to be true for analytical purposes (Hunt, 1976), i.e. to provide building blocks for further propositions here termed theorems. The term "criteria" represent norms or rules or standards for evaluating the logical structure of a theory (Shaw, 1985), which is essentially the purpose of Bartels' metatheory.
   While meta-theory provides rules for analyzing what a theory should contain, it differs from epistemology, the philosophy dealing with the theory of knowledge (e.g. how do we know that something is true). From a philosophy of science perspective, this work follows "scientific realism," as described in detail by Hunt (1990), which he summarized (Hunt, 2002, p. 5, brackets added) in a few propositions: "the world exists independently of its being perceived (classical realism); the job of science is to develop genuine knowledge about the world, even though such knowledge will never be known with certainty (fallibilistic realism); all knowledge claims must be critically evaluated and tested to determine the extent [. . .] [they] accord with the world (critical realism); and the long term success of any scientific theory provides reason to believe

that something like the entities and structure postulated by that theory actually exists (inductive realism)."

2. Neuroscience shows that different areas of the brain are involved in processing satisfaction and dissatisfaction. For the former, the ventral striatum in the limbic system is primarily involved in processing gains, realization exceeding expectations. For the latter, the amygdala is primarily involved in processing losses, expectations exceeding realization (Trepel *et al.*, 2005).

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