The early evolution of the foundations for behavioral organization theory and strategy

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Summary While the field(s) of management theory and the history of modern ideas in management, business education and organizations have many different intellectual roots, the Carnegie Mellon Behavioral trio (James March, Herbert Simon and Richard Cyert) who founded the behavioral perspective on organizations stand out not just for their collective contribution to founding the field of organizational behavior as we know it today, but also for their subsequent individual contributions to the field. Organizations and Behavioral Theory of the Firm set the stage for several subsequent developments in organization and management theory including research on learning, strategic management, organizational economics and organizational routines (Gibbons, 2003; Pierce, Boerner & Teece, 2002; Williamson, 2002, 2004; Augier & Teece, 2005, 2009).

In addition to providing some background on the Carnegie work, this paper traces the genealogy and development of some of the work of the founding fathers, and making the points that (1) while the work of Herbert Simon crossed disciplinary boundaries, he saw himself as doing only one thing, working in understanding limited rationality in decision making and (2) the work of James March shaped the field in a co-evolutionary way since he has been influenced too by the developments in organization studies.

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institutions. For example, Simon who was central to the early development of organization theory, also served as advisor to the first foundation programs on behavioral social science, and was also involved in reforming business education. Similarly, March’s work became central to the fields of organization science and behavioral social science; he, too, was in a business school and also was an early fellow at the then newly established Center for Advanced Study in Behavioral Science (CASBS). It is also clear, in looking back, that key to making many of these developments possible in the first place was the support, intellectual backing, and funding of a few key Cold War developments and institutions, in particular the RAND Corporation and the Ford Foundation (Augier & March, 2011). In their search for research that was interdisciplinary, fundamental, disciplined yet empirically motivated and more realistic than many previous academic traditions, RAND and the Ford Foundation provided institutional and financial support to the field of organization studies and behavioral social science early on. They also provided legitimacy by building and supporting institutions that could further help these emerging fields mature (in particular, in addition to CASBS, the Graduate School of Industrial Administration at, then, the Carnegie Institute of Technology). Within those institutions, the researchers had considerable freedom to do what they found interesting and ultimately central to building better theories and frameworks that could help us understand issues relating to organizational behavior better. Through their individual and joint effort, they helped establish an agenda, and provide an empirically relevant theory of organizational behavior and decision making; and each of them also helped shaping the subsequent developments in the field. The institutional importance of this history is the fundamental reason for the central role of business schools for the development of the field of organization studies (Augier & March, 2011; Augier, March, & Sullivan, 2005).

This paper will not detail the full history of these developments and ideas; instead, I will focus on a few ideas from some of the core contributors to illustrate part of the intellectual evolution that took place. The next section discusses how Simon’s vision for behavioral organization theory (and social science generally) was found in the context of his early work in public administration and political science and was strengthened as Simon proceeded to make contributions to economics; and, finally, found a home with the establishment of the behavioral science in the 1950s. The second step in realizing the behavioral vision, discussed in Section ‘Forming the behavioral vision at Carnegie’, came with the creation of the interdisciplinary research environment at Carnegie, including the recruiting of scholars such as James March and Richard Cyert. Their foundational joint work, as well as some of their individual contributions, are discussed in Section ‘Some themes in later work’. The final section concludes with some remarks on the future of the field.

1 While this present paper is rather short, some further details of some of Simon’s intellectual trajectory I have discussed in Augier (2000, 2001), and in Augier and March (2002, 2008). The section on March’s work touches on arguments that are further developed in Augier (2004, 2013).

Herbert Simon, discovering the limits of rationality

Behavioral organization theory, following Simon’s vision, is interdisciplinary as is strategy and strategic management (Augier, 2001a; Augier & Sarasvathy, 2004). Simon himself didn’t care much about differences between the disciplines; preferring instead of emphasize their commonalities (Augier, 2000). He was unusually firm in his resistance for disciplinary loyalty: "If you see any one of these disciplines dominating you", he said in conversation, "you join the opposition and you fight it for a while". As a result, Simon could appear to be always leaving and never finding home; always embracing a new discipline with passion and intensity, but at the same time always appearing to be moving away and through new concepts and ideas. But in fact, there is a remarkable consistency to Simon’s ideas (Augier, 2000). He was, first and foremost, an organization scholar, interested in exploring the decision-making and limitations to rationality in human behavior in different organizational and institutional settings (Augier, 2001a, 2001b; Augier & March, 2008).

An important thing to keep in mind is that if we are to form an accurate impression of Herbert Simon’s intellectual formation and trajectory, we must begin by abstracting from accounts of Simon which focus on only part of this story and start from the beginning. For, as Simon notes (1988, p. 276), his early focus on decision-making processes of people in organizations "has been my central interest through out my whole professional life."

Born in 1916, Simon spent his early years with his parents and his older brother on the West Side of Milwaukee in a middle-class neighborhood. Attending public schools, Simon at first intended to study biology. However, after he went on a strawberry hunting trip, and discovered that he was colorblind (unable to distinguish the strawberries from the plants), he changed his mind, thinking that color blindness would be too big a handicap in biology. He then thought briefly about studying physics, but he gave up that idea after discovering that there weren’t really any major advances left to be made in physics; ‘‘They have all these great laws’’, he said in conversation. ‘‘Newton had done it, no use messing around with it’’. As a result, upon finishing high school in 1933, Simon enrolled instead at the University of Chicago with an interest in making social science more mathematical, and an intention to major in economics. In keeping with his strong wish to be independent, Simon preferred reading on his own instead of taking classes; and he particularly refused to take the class in accounting, which was required to graduate in economics. As a result, he majored instead in political science.

Political science wasn’t physics, of course; with all their ‘great laws’. However, as a science, it could encompass both theory and practice; and, being an empirical science, it had to take the data seriously. Furthermore,Simon found an appeal to interdisciplinary thinking (in particularly psychology) in understanding political behavior, which attracted him. The details of Simon’s mature work differ, but the underlying ideas, interdisciplinary thinking and the necessity of
Simon, 1991, p. 64). Together with Ridley, Simon published Measuring Municipal Activities, the results of this project in several articles as well as in Administrative Behavior. Simon was "The Logical Structure of an Administrative Behavior," working on an early manuscript of his thesis, which became "The Logical Structure of an Administrative Behavior." Simon discovered that neoclassical ideas on utility maximization did not fit the way in which the budget allocation process under study (in the Milwaukee Parks Department) really worked. Thus, Simon wrote:

"My training in economics, evoked in the context of a budget situation, disclosed a contradiction between what theory taught me ought to be happening and what my eyes and ears showed me was actually happening (Simon, 1991, p. 371).

He never repudiated this early work. In fact, during his career, he made the insights more elaborated and made it the center of his research. As Simon recalled: "Now I had a new research problem: How do human beings reason when the conditions for rationality postulated by the model of neoclassical economics are not met?" (Simon, 1989, p. 376).

As a result of this early work, Simon was invited by Clarence Ridley to participate as a research assistant in a project for the International City Manager's Association (Simon, 1991, p. 64). Together with Ridley, Simon published the results of this project in several articles as well as a book, Measuring Municipal Activities (Ridley & Simon, 1938). This brought an invitation to join the University of California's Bureau of Public Administration to study local government. While working in Berkeley on directing a study of the administration of state relief programs, intended to demonstrate how quantitative empirical research could contribute to understanding and improving municipal government problems (Simon, 1991, p. 82), Simon was also working on an early manuscript of his thesis, what became Administrative Behavior, intended to reforming administrative theory (Simon, 1947). The first working title of Administrative Behavior was "The Logical Structure of an Administrative Science" (Simon, 1977, p. xiii). Simon had intended the book to have a heavy philosophical component; in particular due to being influenced by Rudolph Carnap.

The connection to the Milwaukee study is clear in Simon's dissatisfaction with neoclassical rationality.

"The implication might be drawn from this discussion of rational choice between alternatives involves a complete description of the possibility consequential on each alternative and a comparison of these possibilities," he wrote. "We would have to know in every single respect how the world would be changed by our behaving one way instead of another, and we would have to follow the consequences of behavior through unlimited stretches of time, unlimited reaches of space, and unlimited sets of descriptive variables. Under such conditions even an approach to rationality in real behavior would be inconceivable" (Simon, 1947, p. 38).

Furthermore, Simon introduced the importance of organizations for individual decision-making; a theme later elaborated in especially March and Simon (1958).

"'Human rationality',' he wrote, "'gets its higher goals and integrations from the institutional settings in which it operates and by which it is molded....[Therefore] ...[t]he rational individual is, and must be, an organized and institutionalized individual.'" (Simon, 1947, p. 101–102).

Simon argued that organizations make it possible to make decisions by virtue of the fact that they constrain the set of alternatives to be considered and the considerations that are to be treated as relevant. Organizations can be improved by improving the ways in which these limits are defined and imposed. Finally, Administrative Behavior criticized existing administrative theory for being based on 'proverbs' (often contradictory common-sense principles); a perspective he wanted to replace with a more empirically oriented perspective investigating the nature of the decision processes in administrative organizations.

In Simon's view, Administrative Behavior was the first place in which he systematically examined the importance of limits to human rationality. "'The dissertation contains both the foundation and much of the superstructure of the theory of bounded rationality that has been my lodestar for nearly fifty years'" (Simon, 1991, p. 86). The core chapters of this book intended to develop a theory of human decision making which was broad and realistic enough to accommodate both.

"those rational aspects of choice that have been the principal concern of the economist, and those properties and limitations of the human decision making mechanisms that have attracted the attention of psychologists and practical decision makers" (Simon, 1947, p. xi).

Learning from (and the limits to) economics

Simon returned to Chicago (Illinois Tech) in 1942 and in an environment there where most of his fellow researchers were believers in rational decision-making, Simon remained a strong advocate of the idea of limited rationality. He began to discuss his ideas with prominent economists, in particular those connected to the Cowles Commission which was a group of mathematical economists doing pioneering research in econometrics, linear and dynamic programming, and decision theory, among other things. The economists connected to the Cowles Commission included...
such well-known names as Kenneth Arrow, Jacob Marshal, Tjalling Koopmans, Roy Radner, and Gerard Debreu, and they held regular seminars to discuss their research.

The Cowles Commission itself had a large impact on Simon, in particular with regard to his relationship to economics (Augier & March, 2002; Simon, 1991). Although he had already had a "half-baked elementary training" in economics when enrolling at the University of Chicago in 1933, and had taken several advance courses in economics, without the participation in the Cowles seminars, Simon noted, "I would surely not have had a full command of the tools of economic analysis" (p. 3). Simon used these tools to continue his interest in human decision making, as witnessed for example in his work on causality (Simon, 1952, 1953). But perhaps "the greatest impact of the Cowles exposure on me", Simon says, "was to encourage me to try to mathematize my previous research in organization theory and decision making, especially the theory developed in Administrative Behavior". In particular, Simon mentions three papers that were significant with respect to his influence in economics and his relations to the Cowles Commission. Those were "A Behavioral Model of Rational Choice" (Simon, 1955), "A Formal Theory of the Employment Relation" (Simon, 1951), and "A Comparison of Organizational Theories" (Simon, 1952–1953). Those papers developed ideas that are central to today's behavioral organization theory scholars and helped define and shape the field. In addition to those three papers, Simon wrote a forth paper during those years which deserves mention. This is the paper "Rational Choice and the Structure of the Environment" (1956) in which Simon introduced the idea that the environment influences decision-making as much as information processing abilities do. He examines the influence of the structural environment on the problem of "behaving approximately rationally, or adaptively" in particular environments (Simon, 1956, p. 130). Limited rationality, satisfying, adaptive behavior and complex environments are central topics in modern organization theory and strategy; topics that Simon developed with colleagues at Carnegie.

For at Carnegie, Simon found both colleagues and an environment which could accommodate and appreciate his broad interests and honor his vision to cross disciplinary boundaries in pursuing his vision. With the emergence of a behavioral organization science emphasis at Carnegie also came many contributions of cross-disciplinary and interdisciplinary nature. The disciplinary boundary crossing that had been, if not difficult, then different from the mainstream before, became possible and wider spread with the behavioral research focus that was shaped and backed also by RAND and the Ford Foundation.

Arriving at Carnegie in 1949, Simon worked — with William Cooper and George Lee Bach — to build up a promising new business school, namely the school of industrial administration, which later became known as the Graduate School of Industrial Administration (GSIA). Business education at that time was not much oriented towards research, but Simon and colleagues wanted to be different. They wanted to do research. They wanted their research to be relevant for business leaders, while at the same time emphasizing the tools of good science (Cooper, 2002). Early core courses in the program included "quantitative control and business" (consisting of accounting and statistics) taught by Bill Cooper, a sequence of micro and macroeconomics, taught by Lee Bach, and organization theory taught by Simon. As a result of their early efforts to build up at research program at Carnegie Mellon, GSIA was picked by the Ford Foundation as one of the foremost places where the new science of behavioral economics could be developed. This became a pioneering for the establishment of business education in the United States (Augier & March, 2011).

The Ford Foundation had at that time formulated a program for "the study of man" — which became known as "the behavioral science research area" — the specific objective of which was stated as follows: "The Ford Foundation will support scientific activities designed to increase knowledge of factors which influence or determine human conduct, and to extend such knowledge for the maximum benefit of individuals and of society". Research had to be scientific; embodied in the Ford Foundation's understanding of the behavioral science concept was "its emphasis upon the scientific approach to problem solution". And it had to be practical, to some extend at least, given the foundation's interest not in knowledge per se, but in "knowledge which promises at some point to serve human needs". Furthermore, it explicitly encouraged interdisciplinary research. "The program is interdisciplinary and inter-field. Its goal is to acquire and apply knowledge of human behavior, and segments of all fields and disciplines will make..."
contributions in varying degrees”.

It is clear that this resonates well with Simon’s vision and, not surprisingly, he became an advisor to the Ford Foundation research area on the behavioral sciences (Simon, 1991, pp. 170–171). And he went out to recruit other likeminded social scientists who could collaborate with him.

James March and organizations

One of Simon’s early recruits to Carnegie was James March who went onto become a key contributor to the field of organizations. Viewed in a historical context, the work of March represents a continuation of the behavioral economic program developed at Carnegie in the 1950s and 1960s — a tradition deeply influenced by roots in political science (Augier, 2004). Like Simon, March’s formal education was in political science; also, March’s central research question was in many ways the same as the ones that guided Herbert Simon and Richard Cyert: What is the proper way to understand human action and decision making, and, more specifically, how can theories of rationality and intelligence be aligned with the facts of the world? In order to pursue these questions, Organizations was written, as was A Behavioral Theory of the Firm, both part of the development of the behavioral economics program at Carnegie Mellon University.

Early ideas and work

Born on January 15, 1928 in Cleveland, Ohio, James G. March finished his high-school years in 1945 in Madison, Wisconsin, where the March family had moved in 1937. As a young boy March was an “all around American boy”, playing all sports and also serving as captain of his junior high-school football team. He liked school and became interested in politics. While he took all the mathematics courses available in high school, March had at that time no particular intention of going into a “hard-science” career. Rather, he felt a strong interest in government. As a result, although he had offers from both the military academy and the naval academy, March decided instead to go into political science. “Had I gone the other way, I supposed I would have become an engineer”, March later recalled (March, personal interview).

Living through the post-war years, March had no clear idea how his career would turn out. He went to study for his bachelor degree in political science at the University of Wisconsin. Having completed his undergraduate years, March went onto graduate school at Yale. He also took a job at the Yale Center for Alcohol studies, originally to study college drinking habits. However, March was as much influenced by the ideas of people as from books. Interaction with political scientists such as Robert Dahl and V. O. Key, economist Charles Lindblom, anthropologist George Peter Murdoch, and sociologist Fred Strodtbeck, awakened in March a broad interest in the social sciences. Taking courses in such different fields did not bother March in the least; on the contrary, what might seem to some a schizophrenic existence, March found essential for pursuing his interest and lived quite happily in many different disciplinary worlds at once.

Determined to analyze and understand human decision making and behavior, March felt comfortable with the tools of linear algebra and statistics early on, and felt that these tools were important to model building in the social sciences (Lave & March, 1975). At the same time, however, he also had a deep concern for empirical data and for historical and institutional approaches to economics, political theory, psychology, and other social sciences. This interdisciplinary and cross-disciplinary interest had been fostered early on; he grew up in Wisconsin with a father who was a student of J. R. Commons. March’s interdisciplinary interests made him an interesting candidate for the then-beginning behavioral perspective on human decision making, which was just emerging around Simon and Bach at Carnegie Institute of Technology. In keeping with March’s views, they would develop a strategy for crossing disciplinary boundaries in order to understand human action and decision-making.

Notwithstanding his unusual ability to bring together different aspects of different disciplines, March did see himself as mostly a political scientist early on, as evidenced by the fact that when he first began thinking about jobs, it was political science departments that were on his radar screen. Certainly, he was not thinking about business schools; yet it was at a business school that March got his first academic job. So why in 1953 did he leave Yale for a business school at Carnegie Mellon University (then Carnegie Tech) where he would spend the next eleven years of his career? Why Pittsburgh? He certainly could have stayed in political science. He had a degree from a good university with a good reputation in political science, he was staying at Yale as a SSRC post doctoral fellow, so staying at the east coast would probably have been easier.

It seems likely that at some point March looked at the way his intellectual life was developing and realized that he would soon have to choose between a life in political science and one of interdisciplinary scholarly activity. March had plenty of ideas, some of which connected to organizational studies, and it was time to pursue them or give them up. His dissertation had opened multiple avenues for future interdisciplinary research.

The move to Pittsburgh was a decision to continue living in an interdisciplinary space and to pursue research on decision making in organizations fully, and a decision to engage in collaboration with Simon, who as mentioned, at the time was helping to recruit. Simon knew Robert Dahl, March’s principal dissertation advisor, and asked him for prospective students to meet and Simon went to interview March. Simon recalled about their first meeting:

“We were building up this faculty, so Lee Bach and I were doing most of the hiring. In those days, you didn’t have those big committees, advertising jobs for 6 months and such nonsense. We went to schools where we thought that interesting things were happening and where interesting people were. And then we asked our friends about who were the good doctoral students. So someone gave me Jim March’s name, and we had dinner, and I think I phoned Lee back that same night and told...
him that I was offering Jim a job. That simple it was then. He was tops.” (Interview with Simon, 2001, Augier, 2001b, p. 271).

Although March had warmed up to the idea of studying organizational issues in the dissertation, the theory of the firm itself was “little more than a set of words to me”, March would later recall. But March decided that it would be interesting to work with Simon, and off he went to Pittsburgh where he helped shape the development of Carnegie Mellon University’s new Graduate School of Industrial Administration. “The thing that was attractive about GSIA”, March recalled, “was Herb Simon. I didn’t know much else about the school, and I certainly didn’t know anything about Pittsburgh. But Simon was smart, and he was talking about doing this review of organization studies, and by that time I was kind of thinking that may be that was the direction I wanted to go” (March, personal interview).

While March felt comfortable at the school, he was a political scientist and not, at least at that time, particularly interested in management or business or organization theory per se. This would soon change. March first taught courses in political science and later took over the course on “the history of ideas in social change”. One of his students, who would later become a pioneer in the field of computer science and artificial intelligence, Edward Feigenbaum, remembers that it was this course which attracted him to the school and in particular that March taught ideas from game theory, which was at that time at a very early stage of development, a little more than a decade after the publication of von Neumann and Morgenstern (1944), and before any substantial developments had taken place in non-cooperative game theory. “That was fascinating – absolutely fascinating to me”, Feigenbaum recalls. “That one could apply analytic and careful models to social phenomena” (Feigenbaum, personal conversation). The fact that game theory was taught side by side with social psychology, sociology, and statistics, by a professor educated in political science, is just one sign of the interdisciplinary, but disciplined, spirit at Carnegie.

Only gradually did March move into teaching organizations/business course teaching. However, he quickly established very good work relations with Simon and also with Richard Cyert. He also had many conversations with other colleagues such as Bill Cooper, Fred Tonge, Harold Guetzkow, Franco Modigliani, Allen Newell and Jack Muth, but his principal collaborators were Simon and Cyert.

The 1950s and early 1960s was an important period in the history of ideas, and Carnegie Mellon University during those years proved to be a very stimulating and very productive place where several important ideas were fostered. March, along with Richard Cyert and Herbert Simon developed the field of behavioral economics, which has proved an important alternative to neoclassical economics. Furthermore, it was the place where several other modern developments in economics and organization theory were initiated, such as transaction cost theory and evolutionary economics (Augier & March, 2001, 2002, 2008, 2011; Williamson, 1996, 2002, 2004), not to mention rational expectations theory and linear and dynamic programming. So not surprisingly, Carnegie was also very important to the development of March’s intellectual formation and early ideas. As a context for accommodating and appreciating his interdisciplinary curiosity and interest, Carnegie Mellon greatly influenced the content of March’s research, early as well as later in his career. “I think it would be very hard for anyone who has an academic career”, March said in looking back, “not to find the first ten years of his career very, perhaps the most, influential. And this was a place with a lot of excitement and drive” (March, personal conversation). Furthermore, it was at Carnegie that his thoughts became centered on organizations. While he had a vague notion of organizations before he went to Carnegie, “It certainly became much clearer at Carnegie”, he said. “If I look at everything I have done subsequently, I can see the seeds of all of it at Carnegie” (personal conversation). This also relates to the history of management/business education in general (for a much more lengthy discussion of the evolution of business schools, see Augier & March, 2011).

Forming the behavioral vision at Carnegie

Carnegie quickly became the role model for a research based, disciplinary oriented – but very interdisciplinary – approach to business education and an invigoration of fundamental interdisciplinary research in accounting, finance, marketing, operations research, microeconomics, and organizations. Organizations (March & Simon, 1958) and A Behavioral Theory of the Firm (Cyert & March, 1963) are two significant results of the early work on business research at Carnegie. In addition to filling a need in the establishment of the behavioral sciences, research on organizations became the emergent discipline of business school education, bringing together different disciplines in the study of decision-making and behavior in organizations. As such, this was the image of the Ford Foundation’s behavioral vision that Simon, Cooper and Bach had in mind when forming the GSIA group. As a result, they hired young faculty with similar interests who had the technical skills and contributed to the disciplines, but also a broader knowledge in social science and interest in understanding perspectives from other disciplines.

The group at Carnegie soon consisted of many talented young scholars who were all eager to contribute to this newly formed vision of behavioral science. Despite different disciplinary backgrounds, interests, and despite varying degrees of admiration for the idea of rationality, these teams always worked together in a friendly way. They did not all work together on the same topics and they did not agree on everything, but they focused on their research and it evolved in a complementary fashion. For instance, while much of Simon’s research centered on bounded rationality, the work of Franco Modigliani had a high rational component to it. Regardless of the differences in their intellectual models, they respected each other and didn’t try to impose their views on all their colleagues, since at Carnegie, intellectual curiosity and dedication were highly appreciated and mattered more than disciplinary boundaries. This interdisciplinary, yet disciplined, way of working because pioneering for subsequent developments in economics — and spurred the development of entirely new areas of...
interdisciplinary research on organizations and organizational decision-making.

It was a business school, but they thought of themselves as reforming economics. In keeping with this, and with spirit of the Ford Foundation emphasis, the two major projects, Organizations and A Behavioral Theory of the Firm, sought to integrate economics ideas with those coming from the softer disciplines of sociology and social psychology. In keeping with March's background and perspective (and the ideas of Simon and others), this was a style of analysis and strategy that best suited the emerging business school, but one with very little attention for the boundaries of disciplines.

The emerging behavioral perspectives on firms and organizations

At Carnegie, March worked mostly on organizations (March & Simon, 1958), the behavioral theory of the firm (Cyert & March, 1963, see below), and the concept of power in the study of social systems. The major goal of Organizations was to make a 'propositional inventory' about organization theory in order to list generalizations and to assess empirical evidence to support them (March and Simon, 1993, p. 1). In their view, organization theory builds on ideas from sociology, social psychology and economics, but also borrows from game theory and statistical decision theory. Again, in keeping with the view of the Ford Foundation's, they wanted to unite empirical data-gathering research with rigorous theorizing in order to create a rigorous empirical theory that could organize and so give meaning to empirical facts with legitimate theory. Science, they believed, was the product of the organization of empirical facts into conceptual schemes, and the progress of science was based on the development of more sophisticated and elegant theoretical systems, but not necessarily the discovery of new facts.

Although organization theory as a field was then very new, they examine types of the classical theory — Taylor's scientific management and Gulick and Urwick's departmentalization models and discuss the limitations of these approaches, in particular at the behavioral level (neglect of conflict in organizations; incomplete motivational assumptions; ignoring limitations on rationality, etc.). The bureaucratic theories of Merton and Selznick are discussed and incomplete because they do not explore the different motivations in organizational behaviors. Acknowledging debts to Parsonsian social theory, the conceptual framework of structural—functional analysis is seen as underlying much of existing organization theory. A good example is the Barnard-Simon inducement-contributions schema as it is evident in the use of terms such as "purpose" and "process" in the description of departmentalization (March & Simon, 1958, pp 41–50) and generally, in the view of organizations as adaptive, self-maintaining systems.

The issue of conflict is discussed in particular in terms of the variable of being able to change the contract and they distinguish between intra-individual, organizational and inter-organizational conflict (as well as the possibility of game theory to contribute to the understanding of conflict). Throughout the book March and Simon emphasize the important connections between cognitive factors and motivation that are essential to theories of organizations today; thus both elaborating on Simon's earlier ideas and anticipating themes that March developed later.

By the time Organizations was written, March was also publishing articles relating to A behavioral theory of the firm.9 The particular set-up for A Behavioral Theory of the Firm was a little different than for Organizations. While both grew out of the Ford Foundation's concern for behavioral theory, Organizations was largely written by two people, Simon and March (with the assistance of Harold Guetzkow), whereas A Behavioral theory of the firm was a truly collaborative effort, led by Cyert and March, assisted by graduate students such as William Starbuck, Edward Feigenbaum, Julian Feldman and Oliver Williamson. Perhaps this difference in set up was as much a function of the growth of GSIA than anything else; by the time A behavioral theory of the Firm got started, there were more students around to work on the projects.

A behavioral theory of the firm was also more distinctly oriented towards economics. The authors wanted to present a theory of the firm that was not so much an alternative to the neoclassical theory of the firm as it was an attempt to develop a theory that could be used to study decision making in firms, not just comparative statistics, as in mainstream price theory.10

At the center of A Behavioral Theory of the Firm is the idea of the firm as an adaptive political coalition (also presented in March, 1962), a coalition between different individuals and groups of individuals in the firm, each having different goals and hence the possibility of conflict of interest.

"Since the existence of unresolved conflict is a conspicuous feature of organizations", the authors stated, "it is exceedingly difficult to construct a useful positive theory of organizational decision making if we insist on internal goal consistency. As a result, recent theories of organizational objectives describe goals as the result of a continuous bargaining-learning process. Such a process will not necessarily produce consistent goals" (Cyert & March, 1963, p. 28).

9 Cyert had come to Carnegie in 1948 where he later became dean of the Graduate School of Industrial Administration (GSIA) (1962–1972) and president (1972–1990) of the university. Even when taking on his leadership duties as a Dean and President, he remained very active in publishing and research during these periods. Cyert came to Carnegie Mellon as an instructor of economics, then assistant professor of economics and industrial administration, associate professor and head of the department of industrial management, professor and the dean of the graduate school of industrial administration and President of Carnegie Mellon University. Despite his other important contributions, the main work of his that stand out (at least when it comes to the field of organizations and management) is Behavioral Theory of the Firm.

10 As Cyert and March noted: "Ultimately, a new theory of firm decision making behavior might be used as a basis for a theory of markets, but at least in the short run we should distinguish between a theory of micro-behavior, on the one hand, and the micro assumptions appropriate to a theory of aggregate economic behavior on the other. In the present volume we will argue that we have developed the rudiments of a reasonable theory of firm decision making" (1963, p. 16).
Another insight from the behavioral theory of the firm is the idea of the firm as an adaptive system, which experience is embodied in a number of “standard operating procedures” (routines); procedures for solutions to problems which the firm in the past has managed to solve. As time passes and experience changes, the firm’s routines change through processes of organizational search and learning. As a result, the firm is seen not as a static entity, but as a system of slack, search, and rules that changes over time in response to experience, as that experience is interpreted in terms of the relation between performance and aspirations. Elements of this view of the firm can now be found in modern developments, such as transaction cost economics (Williamson, 1996, 2002) and evolutionary theory (Dosi, 2004; Dosi & Marengo, 2007; Nelson & Winter, 1982).

One of the reasons as for why the Behavioral Theory of the Firm is important is that it demonstrates that decision-making in organizations can be studied in detail; and provides a model that has been followed by many others. In addition to initiating new areas of research on the foundations of organizations, it also influenced significantly several other areas in economics, such as transaction cost economics, evolutionary economics, and computational modeling. One indication of the early importance of a Behavioral Theory of the Firm to economics is seen by the reviews it received at the time by economists. A Behavioral Theory of the Firm received generally positive contemporaneous reviews in by economists and in economics journals (Boulding, 1964; Day, 1964; Liversey, 1964; Winter, 1964). Kenneth Boulding observed that the book “reports some of the most lively and advanced research, and even thought, in this field to date” (Boulding, 1964, p. 592). In a similar vein, Sidney Winter noted:

“...this book delivers a major blow to that battered but hitherto unshaken intellectual construct, the theory of the profit-maximizing firm. Its importance derives from the fact that it presents a well-elaborated alternative theory that stands up well under the tests of both systematic and causal empiricism, rather than from any novelty in the criticisms it levels against orthodoxy...Those who have not heard the distant rumblings of the ‘behavioral revolution’ will be surprised at the momentum it has achieved. The final verdict cannot be predicted, but this book should at least convince most economists that the revolutionaries bear watching” (Winter, 1964, p. 148).

Despite the stronger influence of economics in behavioral theory of the firm, the books, however, also had many similarities. They were both written in a setting in which the interaction between March, Simon and Cyert was very strong. So the ideas therefore merged a lot. In retrospect, March thinks of the two books as having different objectives, more than different ideas. March and Simon (1958) was an attempt to create an inventory; to organize everything known about organization theory; whereas Cyert and March (1963) was much more oriented towards finding something relevant to say about the theory of the firm. The latter focused on issues such as problematic search; it focused on the relevance of learning to the theory of the firm. A more substantial difference, perhaps, is that, although there is at least one chapter on conflict of interest in Organizations, this topic was much more central to A Behavioral Theory of the Firm.

Also, although March and Simon (1958) is predominantly a descriptive theory, it also makes occasional forays into the prescriptive domain, more than does Cyert and March (1963). However, the idea of organizational slack is more important to Cyert and March (1963) than it is to March and Simon (1958), as is the idea of uncertainly avoidance. On the other hand, classical issues such as satisfaction, planning and motivation are importance ingredients in March and Simon (1958), but less so in Cyert and March (1963).

But in both of these works, March and his early co-authors thus proposed to include a more inclusive range of limitations on human knowledge and human computation that prevent organizations and individuals in the real world from behaving in ways that approximate the predictions of neoclassical theory. For example, decision makers are sometimes confronted by the need to optimize several, sometimes incommensurable, goals (Cyert & March, 1963), goals that are unclear, changing, and to some degree endogenous (March, 1978; March & Olsen, 1976). Furthermore, instead of assuming a fixed set of alternatives among which a decision maker chooses, March postulated a process for generating search and alternatives and analyzing decision processes through the idea of aspiration levels (March & Simon, 1958), a process that is regulated in part by variations in organizational slack (Cyert & March, 1963). These are all themes deeply embedded in today’s work in organization theory and strategy (Pierce, Boerner & Teece, 2002).

Some themes in later work

In March’s work after behavioral theory of the firm, the irrational and adaptive aspects of human behavior become more, not less prominent. (In Simon’s work, the theme of bounded rationality remained central as he proceeded to go more into the psychology of decision-making.) With respect to the development of the field of organization studies, it is also important to note that March became engaged in a project to identify some of the core research areas, disciplinary approaches, and methodologies involved in the study of organizations as a field. Shortly after completing these core books, March was the editor of the first Handbook of Organizations (March, 1965).

Writing in the 1970s and 1980s, March also started to develop the point that one of the most important aspect of behavior and decision-making in organization was its essential irrationality. The early phrase — that was used in March, Simon and Cyert’s work — of “bounded rationality” did capture some of that, but March was interested in exploring not only the constraints on decision making that the less-than-fully-rational behavior constitutes, but also the more positive implications, thus understanding both how limits to rationality constrain as well as enable certain decision making behaviors — the issue of learning, as well as identity and rules driven behaviors, for example, result because of human irrationalities, not despite them.

March worked on many parallel tracks, all of them central to the field of organizations. For example, March — along with Charles Lave — developed a set of ideas about
the art of formal modeling in the social sciences (Lave & March, 1975). Developed both as a class he taught at Irvine and a book, *Introduction to Models in the Social Sciences* showed his continuing interest in models. One student of the class (and reader of the book) reported that the class “dazzled me with insight after insight about how relatively simple logical and mathematical models of social phenomena like decision making, diffusion through social networks, trial and error learning, and economic exchange could be assembled and exercised to make powerful predictions of micro and meso-level organizational outcome that could, in turn, be tested, and the models progressively refined” (Lewitt, 2010, p. 223). And the work on the handbook demonstrated (March, 1965) not only March’s continuing interest in the field, but also a maturing of the field itself; the fact that the field was ripe for a handbook signals that it had already then elements of foundations and methods in place to become a more structured or systematic field of study. The handbook represented thus an important step in the professionalization of the field of organizations and a visible path that had begun by his early work with Simon and Cyert.

March’s later work on institutional and political theory, developed especially after March came to Stanford. March and Olsen (1989, 1995) saw institutions and organizations as fundamentally social in nature, embedded in the larger institutional and historical context of which they are part. Like the more general work, the work on political institutions emphasizes the inefficiency of history, the ways in which history is path dependent and the ways in which action stems from social identities as much as from incentives. The notion that rules are central is brought to the fore through an emphasis on action as stemming not from a calculation of consequences but from matching a situation to rules of behavior.

Also, his focus on rule and identity-driven behavior leads naturally to a concern with the ways in which rules change over time. In recent work with Martin Schulz and Xueguang Zhou, March has explored the development of rules through a quantitative study of rule change over an extended period of time (March, Schulz, & Zhou, 2000). Another key theme in his later work is examining the problems of achieving a balance between “exploration” and “exploitation” (see, in particular, March, 1991, 1996). Exploiting existing capabilities is full of rewards in the short run, but does not prepare people for changes in technologies, capabilities, desires, tastes and identities. For such preparation, exploration is necessary. Exploration involves searching for things that might come to be known, experimenting with doing things that are not warranted by experience or expectations. Throughout March’s work, a central question has been the way in which organizations and their decision makers deal with and resolve uncertainties and ambiguities, both in goals and preferences and in environments, with which organizations are surrounded. As he emphasized in an article published in *The Bell Journal of Economics*:

“Rational choice involves two kinds of guesses: guesses about future consequences of current actions and guesses about future preferences for those consequences. Neither guess is necessarily easy. Anticipating future consequences of present decisions is often subject to substantial error. Anticipating future preferences is often confusing. Theories of choice under uncertainty emphasize the complications of guessing future consequences. Theories of choice under conflict or ambiguity emphasize the complications of guessing future preferences” (March, 1978, p. 268–269).

Such foundational and path breaking ideas have been central to developing organization theory as well as certain subfields within economics and management.

Closing

This paper has described some of the early intellectual foundations for the field of behavioral organization theory, in particular through Simon and March’s work, and outlined some of the broad paths of Simon and March’s early vision and their establishment of an interdisciplinary behavioral organization theory. Simon continued to develop these early themes as he proceeded to work on human problem solving, artificial intelligence, and other topics. “This was more of the same,” Simon noted (1988, p. 246), referring to the relations between his early work on organization theory and decision making, and his later work on problem solving. Understanding the early evolution of Simon’s work thus helps us understand subsequent development of the fields to which he contributed. Decision making in organization remained the core. March’s work most explicitly continues to form central paths within organization studies and subsequent contributions to sub-fields such as organizational learning and strategy also acknowledge the intellectual debt.

Finally, throughout the paper, I have pointed to the importance of the time and place these developments took place in; Carnegie Mellon University’s GSC was one of a handful of post war institutions that became central to developments not just in management and organizations but in economics, behavioral social science, and many other areas (Augier & March, 2011).

References


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