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RESEARCH IN THE SOCIOLOGY OF
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CARNEGIE GOES TO CALIFORNIA: ADVANCING AND CELEBRATING THE WORK OF JAMES G. MARCH

EDITED BY

CHRISTINE M. BECKMAN

University of Southern California, USA



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INVESTOR IN PEOPLE

To Jim and his students – past, present and future

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LIST OF CONTRIBUTORS

Mie Augier	<i>Naval Postgraduate School, USA</i>
Julian Barg	<i>Western University, Canada</i>
Sean F. X. Barrett	<i>US Marine Corps, USA</i>
Markus C. Becker	<i>University of Southern Denmark, Denmark</i>
Christine M. Beckman	<i>University of Southern California, USA</i>
Tom Christensen	<i>University of Oslo, Norway</i>
M. Diane Burton	<i>Cornell University, USA</i>
Scott C. Ganz	<i>Georgia Institute of Technology, and American Enterprise Institute, USA</i>
Yanfei Hu	<i>University of Surrey, UK</i>
Per Læg Reid	<i>University of Bergen, Norway</i>
Chengwei Liu	<i>ESMT Berlin, Germany</i>
Cameron McAlpine	<i>Western University, Canada</i>
Daniel A. Newark	<i>HEC Paris, France</i>
Charles A. O'Reilly	<i>Stanford University, USA</i>
Claus Rerup	<i>Frankfurt School of Finance and Management gGmbH, Germany</i>
Zur Shapira	<i>New York University, USA</i>
Sim B. Sitkin	<i>Duke University, USA</i>
Chia-Jung Tsay	<i>UCL School of Management, UK</i>
Lee Watkiss	<i>Western University, Canada</i>
Thierry Weil	<i>Mines Paristech PSL, France</i>
Mark J. Zbaracki	<i>Western University, Canada</i>

ABOUT THE CONTRIBUTORS

Mie Augier is a Professor at the Naval Postgraduate School. She has published in areas such as organizational studies, strategy, leadership, and the history of management education; and researches and teaches in the areas of strategy, critical and strategic thinking, and strategic leadership; and the history, organization, and strategy of US Marine Corps.

Julian Barg is a PhD candidate in Sustainability at Ivey Business School. His work focuses on the environmental impacts of large corporations. He works both with qualitative and quantitative data on those environmental impacts, and analyzes how social processes give rise to discrepancies between those two dimensions.

Sean F. X. Barrett is a Major and Active Duty Intelligence Officer in the US Marine Corps. He has previously deployed in support of Operations IRAQI FREEDOM, ENDURING FREEDOM, ENDURING FREEDOM-PHILIPPINES, and INHERENT RESOLVE. He is also a PhD student in the Department of War Studies, King's College London.

Markus C. Becker is Professor at the Strategic Organization Design Unit, University of Southern Denmark. His research focuses on how organizations adapt and learn, especially if work in organizations is to some degree accomplished through organizational routines. His work has appeared in, for example, *Organization Science* and the *Strategic Management Journal*.

Christine M. Beckman is the Price Family Chair in Social Innovation and Professor at the Sol Price School of Public Policy, University of Southern California. Her research spans organizational learning, interorganizational networks, gender and inequality, and innovation and entrepreneurship. She is the current Editor-in-Chief at *Administrative Science Quarterly*.

M. Diane Burton is a Professor at the ILR School at Cornell University and the Chair of the Human Resource Studies Department. Her research focuses on entrepreneurship and employment, organizational design, and human resource management practices.

Tom Christensen is Professor Emeritus at Department of Political Science, University of Oslo. He is also Visiting Professor at Renmin University and Distinguished Visiting Professor at Tsinghua University. He has published extensively on central civil service, comparative public sector reforms and national

sector reforms – crisis management, police, higher education, welfare administrative, etc., based on central perspectives from organization theory.

Scott C. Ganz is an Assistant Professor at Georgia Tech's School of Public Policy and a Research Fellow at the American Enterprise Institute. His research integrates organizational theory and political economics in order to better understand political processes within organizations and governments and the non-market strategies of firms and interest organizations.

Yanfei Hu is Lecturer in Sustainability, Surrey Business School, University of Surrey, United Kingdom. Her research focuses on sustainable development and social change. In particular, she is interested in how advocacy organizations tackle deeply rooted social and environmental problems.

Per Lægreid is Professor Emeritus at the Department of Administration and Organization Theory, University of Bergen, Norway. He has published extensively on public sector reforms, public governance, public management, central civil service, accountability, crisis management, and comparative public administration from organizational and institutional perspectives.

Chengwei Liu is Associate Professor of Strategy and Behavioral Science at the European School of Management and Technology (ESMT Berlin). He received his PhD from the University of Cambridge. His research interests include the role of luck in management, behavioral strategy as arbitrage, and organizational learning and design in the age of artificial intelligence.

Cameron McAlpine is a PhD candidate in Organizational Behavior at Ivey Business School. A career in communications and advocacy work gave him a keen interest in power, politics, and creativity. His research focuses on political processes through which organizations negotiate rules and status hierarchies at the institutional level of analysis.

Daniel A. Newark is an Assistant Professor at HEC Paris. His research focuses on individual and organizational decision making.

Charles A. O'Reilly is the Frank E. Buck Professor of Management at the Graduate School of Business at Stanford University. His research spans studies of organizational demography, culture, leadership, and executive compensation, and organizational innovation and change.

Claus Rerup is a Professor at Frankfurt School of Finance and Management, Germany; he studies organizational routines, attention/sensemaking and learning dynamics. His work has been published in *Administrative Science Quarterly*, *Academy of Management Journal*, *Journal of Management*, *Organization Science* and several other journals and handbooks.

Zur Shapira is Professor at NYU's Stern School of Business. He is a fellow of the *American Psychological Society* and *Academy of Management* and former Editor-in-Chief of *Organization Science*. His books include *Risk Taking: A Managerial Perspective*; *Organizational Decision-Making*; *Technological Innovation: Oversights and Foresights*; *Organizational Cognition*; and *The Evolution of a New Industry: A Genealogical Approach*.

Sim B. Sitkin is Michael W. Krzyzewski University Professor and Professor of Management and Public Policy at Duke University. His research focuses on the effects of leadership and organizational control on trust, risk taking, experimentation, learning, and innovation. His most recent books are *Organizational Control*, *The Six Domains of Leadership*, and *The Routledge Companion to Trust*.

Chia-Jung Tsay is Associate Professor of Organizational Behavior at UCL School of Management, University College London. She received her PhD from Harvard Business School. Her research examines the psychological processes that influence decision making and interpersonal perception, and nonconscious biases in professional selection and advancement.

Lee Watkiss is an Assistant Professor of General Management at Ivey Business School. His research focuses on how choices get made in and by organizations. In particular, he explores the cultural processes that undergird how actors create the situations that in turn shapes the choices they make.

Thierry Weil is a Professor at Mines Paris PSL, working on the future of industry and work, and a member of the French Academy of Engineering. He has held different positions related to R&D and management in companies, universities, and government. He wrote *Invitation à la lecture de James March*, a biography of Pr. March.

Mark J. Zbaracki is an Associate Professor of General Management at the Ivey Business School at Western University. His research interests include the social construction of managerial practices, decision making, strategy implementation, routine dynamics, and organizational learning.

FOREWORD: RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS

Research in the Sociology of Organizations (RSO) publishes cutting edge empirical research and theoretical papers that seek to enhance our understanding of organizations and organizing as pervasive and fundamental aspects of society and economy. We seek provocative papers that push the frontiers of current conversations that help to revive old ones, or that incubate and develop new perspectives. Given its successes in this regard, RSO has become an impactful and indispensable fount of knowledge for scholars interested in organizational phenomena and theories. RSO is indexed and ranks highly in Scopus/SCImago as well as in the Academic Journal Guide published by the Chartered Association of Business schools.

As one of the most vibrant areas in the social sciences, the sociology of organizations engages a plurality of empirical and theoretical approaches to enhance our understanding of the varied imperatives and challenges that these organizations and their organizers face. Of course, there is a diversity of formal and informal organizations – from for-profit entities to non-profits, state and public agencies, social enterprises, communal forms of organizing, non-governmental associations, trade associations, publicly traded, family owned and managed, private firms – the list goes on! Organizations, moreover, can vary dramatically in size from small entrepreneurial ventures to large multi-national conglomerates to international governing bodies such as the United Nations.

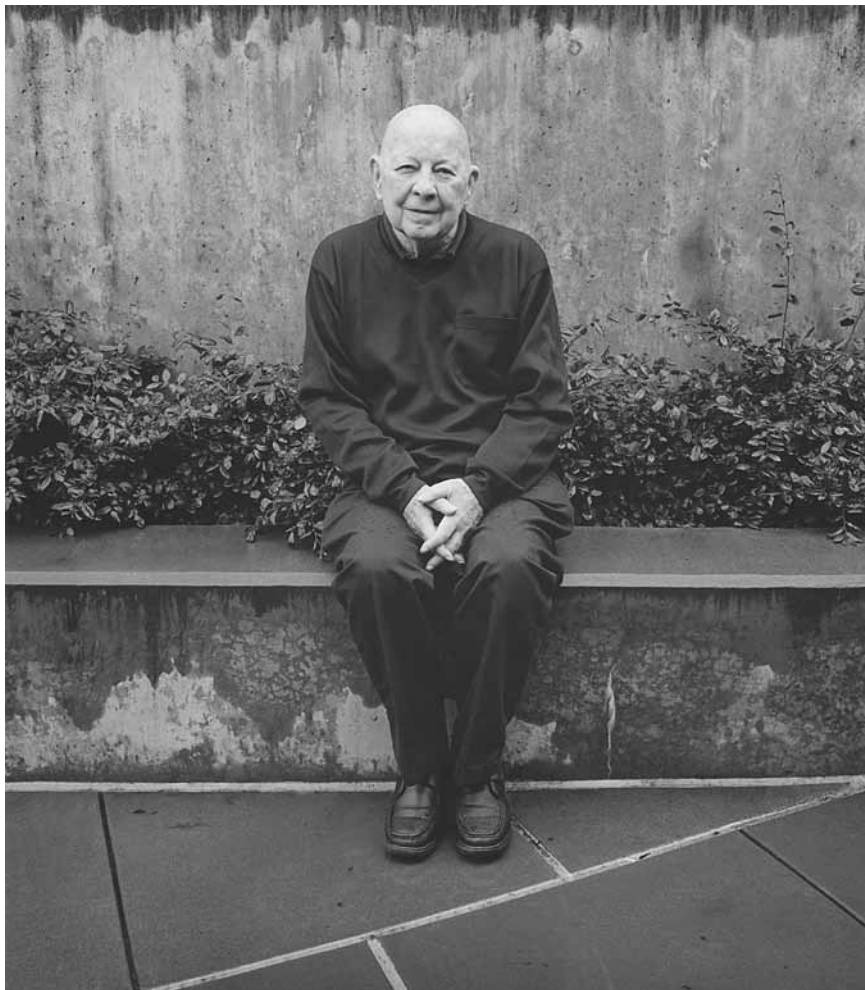
Empirical topics addressed by RSO include: the formation, survival, and growth of organizations; collaboration and competition between organizations; the accumulation and management of resources and legitimacy; and how organizations or organizing efforts cope with a multitude of internal and external challenges and pressures. Particular interest is growing in the complexities of contemporary organizations as they cope with changing social expectations and as they seek to address societal problems related to corporate social responsibility, inequality, corruption and wrongdoing, and the challenge of new technologies. As a result, levels of analysis reach from the individual, to the organization, industry, community and field, and even the nation-state or world society. Much research is multi-level and embraces both qualitative and quantitative forms of data.

Diverse theory is employed or constructed to enhance our understanding of these topics. While anchored in the discipline of sociology and the field of management, RSO also welcomes theoretical engagement that draws on other disciplinary conversations – such as those in political science or economics, as well as work from diverse philosophical traditions. RSO scholarship has helped push forward a plethora theoretical conversations on institutions and institutional change, networks, practice, culture, power, inequality, social movements,

categories, routines, organization design and change, configurational dynamics, and many other topics.

Each volume of *RSO* tends to be thematically focused on a particular empirical phenomenon (e.g., creative industries, multi-national corporations, and entrepreneurship) or theoretical conversation (e.g., institutional logics, actors and agency, and microfoundations). The series publishes papers by junior as well as leading international scholars, and embraces diversity on all dimensions. If you are scholar interested in organizations or organizing, I hope you find *RSO* to be an invaluable resource as you develop your work.

Professor Michael Lounsbury
Series Editor, *Research in the Sociology of Organizations*
Canada Research Chair in Entrepreneurship & Innovation
University of Alberta



JAMES G. MARCH, January 22, 2017, Palo Alto, California © Marianna Cook 2017

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ALTERNATIVES AND COMPLEMENTS TO RATIONALITY¹

Christine M. Beckman

As a scholar, James G. March looms large over the field of organization theory – and his influence extends to sociology, political science, psychology, economics, public administration, and education. This profound impact belies his quiet and humble persona as a “country boy from Wisconsin.”² Born in Ohio, and raised in Wisconsin, his first job after receiving his PhD in Political Science from Yale University was at the Carnegie Institute of Technology (now Carnegie-Mellon University) in Pittsburgh. Jim March served on the faculty there from 1953 to 1964, with colleagues and eventual co-authors Herbert Simon, Richard Cyert, and Harold Guetzkow. Together they worked to develop a behaviorally oriented science of “administration.” This interdisciplinary effort established the field of organizations³ and is what we now call the “Carnegie School.”

Along with [Simon’s \(1997\) *Administrative Behavior*](#), [March and Simon’s \(1958\) *Organizations*](#) and [Cyert and March’s \(1963\) *A Behavioral Theory of the Firm*](#) are the texts that encapsulate the Carnegie School. It is worth pausing to appreciate the fact that *Organizations* was published when March was 30 and *A Behavioral Theory of the Firm*, 35. Jim March may have been humble, but those are two humbling facts for those of us no longer in our 30s. Another fact worth noting: although they would be good friends for many years, Jim March and Herb Simon worked together for three years ... “Just three” ([March, 2004](#), p. 534).

While these numbers underscore just how extraordinary this burst of intellectual productivity was, they also reveal how much attention is focused on an early and short period of a long academic career. When Jim March left for California in 1964, he was 36 years old and the bulk of his career was still before him. March’s post-Carnegie academic life would continue for 50 more years.⁴ However, this “later” work,⁵ with the exception work on organizational learning, has received less appreciation than its quality deserves. The goal of this paper – and indeed

this volume – is to focus attention on March’s post-1970 scholarship, much of which challenges conventional organizational thinking (and to give a sense of the man who wrote so beautifully and poetically).

In brief, this paper delineates six decision-making processes introduced by March that deviate from rationality. Each of these processes can be seen as constituting or serving intelligent choice. Although March’s exact definition of intelligence evolved (e.g., see [March, 1999, 2006, 2010](#)), the key insight is that intelligence and rationality are not synonymous. Rather, intelligence is a genus with multiple species. It is a destination reachable by several paths, of which rationality is only one. And often the most accomplished travelers are those who can take a variety and combination of routes.

Notably, these alternatives to rationality are neither a repudiation nor a repetition of his early work, but rather an evolution and broadening of his initial ideas. Although we conceive of the Carnegie School work as canonical, with all the fixedness that entails, March neither ossified nor deified his prior thinking. He continually poked, prodded, iterated, and revised. In playing with ideas, he tried out new phrasings and explored different nuances. To understand the evolution, however, it is important to start at the beginning.

THE CARNEGIE SCHOOL

The sheer number of (now) familiar ideas found in the Carnegie School’s principal texts is astonishing. For example, bounded rationality, satisficing, problemistic search, standard operating procedures, sequential attention to goals, dominant coalitions, allocation of attention, and aspirations levels. These are powerful “little ideas” that have shaped scholarly conversations for over 60 years ([Liu, Maslach, Desai, & Madsen, 2015](#), p. 153). Several reviews have summarized this work and subsequent scholarship ([Gavetti, Greve, Levinthal, & Ocasio, 2012](#); [Gavetti, Levinthal, & Ocasio, 2007](#)). As noted by [Argote and Greve \(2007\)](#), two hallmarks of this work are an emphasis on process and on behaviorally accurate representations – the focus is not normative in describing what firms *should* do, but rather descriptive in describing what firms *actually* do.

Bounded rationality is perhaps the Carnegie School’s most prominent legacy. Its core insights about the ways that human limitations of time, attention, information, and cognitive ability restrict rationality challenged the economic models of the time. This came to be an increasingly accepted part of scholarly understandings of choice: neoclassical economic rationality as the primary tool for decision making was increasingly modified to allow for *bounded rationality*. March would take these ideas as a point of departure as he and his family headed West.

Before we follow him there, there are a few things to note. First, I use “rationality” as an umbrella term for pure rationality, bounded rationality, procedural rationality, and intended rationality. Since the focus of the present work is on March’s alternatives and complements to rationality, distinguishing between versions of rationality itself is less of a priority. Second, all decision makers

in these models are “bounded” – having limited time, attention, and cognitive abilities – even when rationality is not the decision-making process they employ. Finally, I do not focus on March’s extensions of bounded rationality itself. For example, while it is true that bounded rationality was developed at Carnegie, the notion that preferences are ambiguous and unstable was developed by March after he left Pittsburgh (March, 1978).

CARNEGIES GOES TO CALIFORNIA

Although March joined the faculty at Stanford in 1970 and spent the rest of his career there, he first moved to Irvine, in sunny Southern California. He was the founding dean of the School of Social Sciences at the University of California, Irvine when it first opened its doors to students in 1965. This was a formative experience that shaped the next phase of his career. There are any number of hypotheses about why this experience was so influential: because as Dean he was responsible for on-the-ground organizational decisions while establishing a *new* school at a *new* university; he was teaching students and “managing” faculty in the bohemian, free-love environment of 1960s California; he was establishing new and strong professional relationships (Michael Cohen was a doctoral student at UC Irvine,⁶ and Johan Olsen was a visiting scholar from Norway). Whatever the reasons, it is at UC Irvine where many of his views of education were first articulated (see Weil, this volume), and it is also where he began to embrace ambiguity in organizational life (Cohen & March, 1974).

In the foreword to *On Leadership*, Jean-Claude Thoenig begins: “The thinking of March is disconcerting” (March & Weil, 2005, p. vii). Irvine is where we can start to see just how disconcerting this work is – work that remains unsettling today even as bounded rationality has become well-established and familiar. Unfortunately, the provocative ideas March introduced during these decades, and the work of scholars building on them, are often eclipsed by the original Carnegie School trilogy in our teachings and memories. My goal is to encourage organizational scholars to embrace a broader reading of the Carnegie School – including after Carnegie went to California.

March explored many possibilities for intelligence in decision making. He described alternatives to rational decision-making processes, and he allowed these other distinct decision-making processes to be part of intelligent choosing. I speak to them here individually, but it can be argued that it is in combination that these processes are most powerful (such as by combining rationality and foolishness; see Hu and Rerup, this volume; Ocasio, Rhee, & Boynton, 2020). Here, six decision-making processes are surveyed:⁷

1. Organizational adaptation through learning, in particular learning under uncertainty and the challenges of exploration and exploitation (Levinthal & March, 1993; March, 1991; March & Olsen, 1975).
2. Garbage can models (Cohen, March, & Olsen, 1972).
3. A technology of foolishness (March, 1971, 1972, 1976).

4. Models of chance (e.g., [March & March, 1977](#)).
5. Decision making as interpretation ([March & Sevón, 1989](#)).
6. A logic of appropriateness ([March & Olsen, 1984, 2006](#)).

The contributors to this volume present these core ideas in more detail in their respective pieces, but here I offer a brief summary and example. In his classes, March commonly drew on a parent's vantage point – using what a parent sees (and sometimes says and does) as a familiar reference to make his points clear. I do the same here, using my son Theo's choice of college major as a way to illustrate March's ideas about possible decision-making processes.

Theo has to choose his major. How can he decide?

0. Rationality. A rational decision process is the baseline to explore before elaborating alternatives to rationality. Although pure and bounded rationality differ in important ways, they both call for decisions to be made based on the attractiveness of expected consequences. The decision maker asks: What are my preferences? What are the alternatives? What are the expected consequences of those alternatives? And how do I value those potential consequences?⁸

As Theo works through this process, he starts by looking at physics and math. These were his favorite classes in high school, so he focuses on those, not paying much attention to majors like comparative literature or electrical engineering. He doesn't even realize Portuguese is an option. He makes a list of pros and cons to help him think through the potential consequences of majoring in physics versus math. He considers how well he is likely to do in his classes. He considers his probable job prospects after graduation. He notes that majoring in physics seems like it would work out fine – he expects his grades would be good enough and that he'd be able to find a good job after graduation. This decision-making process is defensible, despite his limited knowledge of alternatives and the uncertain consequences of pursuing any one of them; yet, doubts begin to creep in. He hasn't enjoyed his math and physics classes as much as he had expected. Are these still his favorite subjects or is that changing? And what about the potential consequences – it feels like he is making up what life after college might be like? His discomfort isn't resolved by his lists, but he is not sure how else to think about it. For Theo's sake, what are some alternatives to this decision-making process?

1. Decision making as learning. A good deal of Jim March's work falls within the broad bucket of organizational learning. Juxtaposed against rationality, a key assumption of organizational learning is that organizations determine their behavior based on past performance rather than calculations of expected consequences. This is visible in the original Carnegie School writings: organizations are adaptive, learning from past experience, and developing aspirations as a function of that past performance ([Cyert & March, 1963](#)). Organizational learning offers the first alternative decision-making process, as another form of intelligence; learning is adaptive and attentive to the past, and is subject to a different set of limitations than decision-making processes of rationality. History is inefficient, experience is ambiguous, and it can be difficult to learn from small samples of experience. An additional challenge is that feedback leads organizations to

become trapped in competency or exploration traps given the myopia of learning (Levinthal & March, 1993; Levitt & March, 1988; March, Sproull, & Tamuz, 1991; March & Olsen, 1975). Organizational learning highlights the possibility of superstitious learning, where one can “learn” a particular action leads to success when that is not actually the case. Given the ambiguity of cause–effect relationships, and the likelihood of getting trapped in a sub-optimal solution (due to local search, short time horizons, and rugged landscapes), this type of superstitious learning happens frequently. Just as bounded rationality limits decision makers’ ability to predict the future, the ambiguities of experience limit decision makers’ ability to learn from their past experiences. But it’s a strong alternative to rationality as a decision-making process.

Theo is attentive to his past performance, observing how he performed in his classes during his first year, and comparing himself to his peers in those classes. Of course, there are some ambiguities in his experience. He liked physics better but got a better grade in math. He knows how only some of his peers did, and those tend to be his friends. He’s taken more math, physics, and history classes in his first year and a half, so he has more data on those experiences. One friend is a computer science major and thinks Theo might like that. His parents agreed, and he took a computer science class last semester. He did like it, but it was just one class. There is only so much he feels like he has learned thus far.

2. *Garbage can models.* March and colleagues described how garbage can models of decision making reflect behavior as a constellation of problems, solutions, participants, and choice opportunities (Cohen et al., 1972). Rather than organizations working with clear and stable preferences, certain of its processes, and comprised of stable participants, organizations are viewed as organized anarchies with problematic preferences, unclear technologies, and fluid participation. March observed that this describes behavior in organizations – particularly faculty meetings, based on his observations as Dean. Choices are made based on a temporal assemblage: who is in the room at the moment, the preferred “solutions” those people are offering, the problems participants are raising, and the decision that must be made today. Rather than trying to establish a decision-making process of rationality (a fool’s errand, given human beings’ limitations), decision makers might learn to manage such garbage can processes (see Lomi & Harrison, 2012, for an entire volume dedicated to garbage can processes). Garbage can models highlight the importance of temporal ordering and the political dynamics of decision making. This is a descriptive model, focused on trying to explain how decision makers actually behave. Although they acknowledged that “the garbage can process does not resolve problems well” (Cohen et al., 1972, p. 16), they also argue that the conditions for rationality cannot be met. Where does that leave us, prescriptively (even if answering this question wasn’t the focus of the original model)? Rather than strive for rationality in our decision-processes, a decision maker might focus on broadening participation or the choice set. Another approach is to consider when garbage can processes produce superior outcomes to a boundedly rational one. Ganz (this volume) outlines certain conditions under which garbage can decision making results in more optimal decisions than the alternatives.

What does a garbage can model suggest about Theo's search for a major? At his university, Theo has to declare his major in a 2-week period in the spring (this is the choice opportunity). The decision hinges on what is happening in Theo's life (and mind) in that window. The requirement to declare a major is one of the problems facing Theo. But so too is making friends and developing a social life. March might point out that there is someone cute in Theo's physics class. The professor decided to assign seating and suddenly there were new people in Theo's sight line. That's now a problem to be solved too – and one that may not have been there last week much less last term. Depending on his current course load, he may have more or less time to contemplate the decision than he would have at other times. He also may be discussing the decision with different people walking to and from class than he would have last term, and some of those people may be advocating for their intended major. Plus, don't some decisions just look a little different in spring than winter? Rather than a logical process based on stable preferences and a systematic search for a solution to a clearly defined problem, Theo's choice is highly influenced by simultaneity – by the ideas, preferences, problems, alternatives, and people that happen to come together at the time of choice.

3. *Technology of foolishness.* March introduced the term “technology of foolishness” as a complement to “technology of reason” for those “situations in which there has been an overlearning of virtues of conventional rationality” (March, 1976, p. 79). Again, and importantly, this is not the antithesis of rational decision making, but rather a beneficial companion to it.⁹ A technology of foolishness suggests that goals are discovered through choice, not only known prior to it, and we make decisions in order to discover and test new possibilities. Decision making is a form of hypothesis testing. We can “treat action as a way of creating more interesting goals at the same time as we treat goals as a way of justifying action” (March, 1976, p. 75). To enable discovery and experimentation, playfulness is promoted as the temporary letting go of rules and rationalizations. It encourages us to tolerate inconsistent beliefs and behavior. At the heart of a technology of foolishness is *Don Quixote*: “The point is to act foolishly without justification.” This action for the sake of acting, or for “no good reason,” is how we discover new goals and test out new hypotheses.

Where does this leave Theo? Jim March spoke at the junior convocation at Stanford in 1988 and had some clear advice for him:

choose the area of your expertise arbitrarily, not because it will help you or is relevant to your future life in some measurable way, but precisely because it probably will not and is not.

This approach broadens horizons considerably. Theo opens the course catalog and asks his parents what anthropology entails. This approach also takes the pressure off the decision itself – there is not a “wrong” choice, maybe he could flip a coin – although the bureaucracy still requires a decision to be made. Each class he has taken offered a question – a hypothesis of a possible major. This is the beauty of distribution or general education requirements taken early in college, those courses provided some hypothesis testing and goal exploration. But that matters little. The point is to decide and commit for no legitimate reason, as