Burnout emerged as a pathology of trying to integrate individuals with organizations; the solution, however surprising, was to link employees to the leaders of the group. The leader, practicing self-awareness and self-monitoring, could become a model of both how to deal with one's frustrations and how not to criticize the corporation but instead find fault with oneself. Burnout thus became, to a large extent, a humanistic management tool—one for managing managers and that could, in turn, manage the group. It ensured that employees would accept their inherent conflict with the organization but work diligently to become integrated with it; by following the leader, an employee could both work for the group and be an individual. If burnout became an issue in the 1970s because of a genuine concern about conflict between the individual and the organization, by the 1980s burnout became popular because of its utility as a management tool, convincing executives—and by extension, their subordinates—to practice self-monitoring, self-assessment, and self-therapy for their own benefit and that of the corporation.

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Kira Lussier

Managing Intuition

"Slowly but surely the tables are being turned on the 'organization man,'" heralded *Dun's Review and Modern Industry* in 1966.[58] The business world was entering the "age of the intuitive manager," a new type of leader who relied not on established procedures or analytical reasoning, but on the "visionary and anticipatory qualities" of intuition.[59] Once credited with economic prosperity, bureaucratic management structures—and the "organization men" who populated them—were now perceived as stifling innovation and impeding information

[58] John T. Kimball, "Age of the Intuitive Manager," *Dun's Review and Modern Industry* (Jan. 1966): 42.
[59] Ibid.

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flows.[60] Management's overreliance on careful planning, established procedures, and authoritarian lines of hierarchy no longer sufficed in the competitive, complex, and ever-changing business climate of the late twentieth century. The article urged corporations to overcome their skepticism of intuition, to recognize the "reason and order in intuitive judgment," and to structure their organization to allow for the emergence of the intuitive manager, who would spearhead organizational renewal.[61] *Dun's Review*'s proclamation was a prescient one; by the late 1970s and 1980s, intuition was widely regarded by leading authorities as an essential management trait.[62]

At first, however, champions of intuitive management faced skepticism from business leaders, who tended to see intuition as mysterious, unexplainable, or overly emotional.[63] As management writer Harold Leavitt noted, one could not expect to be taken seriously talking about "hunches and gut feelings—not until you can index them."[64] Proponents of intuitive management developed an arsenal of techniques, from personality tests and brain scans to creativity seminars and assessment centers, to measure, and in turn cultivate, intuition. Psychological tests, by making intuition measurable, helped consultants overcome business skepticism and convert intuition into a legitimate form of managerial reasoning. To understand the emergence of intuitive management, I examine the adoption of the Myers-Briggs Type Indicator (MBTI) across different spaces, from creativity research and neuroscience to corporate training seminars.

The version of intuition spread by these consultants and psychologists, referring to a conglomerate of perceptual, affective, and cognitive processes, was not always consistent or coherent.[65] However, discussions of managerial intuition shared a commitment to explicate intuition in rational terms, describing it as a mode of rapid, unconscious, nonlinear information processing that holistically perceived patterns in masses of data and resulted in decisions oriented to the future and the big

[60] The classic text that credited managerial capitalism with American economic prosperity is Alfred D. Chandler Jr., *The Visible Hand* (Cambridge, Mass., 1977).

[61] Kimball, "Age of the Intuitive Manager," 42.

[62] Tom Peters and Robert Waterman, *In Search of Excellence: Lessons from America's Best-Run Companies* (New York, 1982); Buckminster Fuller, *Intuition* (London, 1983); Roy Rowan, *The Intuitive Manager* (Boston, 1986); Frances Vaughan, *Awakening Intuition* (New York, 1979); Weston Agor, *Intuitive Management* (Eaglewood, N.J., 1984).

[63] Intuition's long association as a feminine mode of reasoning was certainly part of the skepticism toward its emotional element.

[64] Harold Leavitt, "Beyond the Analytic Manager," *California Management Review* 17, no. 3 (1975): 9.

[65] Jeffrey Mishlove noted *seventeen* connotations of intuition, ranging from "gut feeling" to extrasensory perception. Mishlove, "What Is Intuition?" in *Intuition at Work*, ed. Roger Frantz and Alex Pattakos (San Francisco, 1996).

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picture.[66] They explained intuition not as a mysterious or mystical process, but as a necessary cognitive mode for the knowledge worker.[67] By examining how scientific research and psychological techniques converged with business concerns about technology and innovation, I unpack how the "intuitive manager" became an ideal type for governing in a knowledge economy.

Measuring Intuition

You open the test booklet, no. 2 pencil in hand, and face hundreds of short questions that, answered honestly, will indicate how you perceive the world and make decisions. Scanning the questions, you notice recurring patterns, asking if you prefer theories or facts, abstract ideas or concrete experience, possibilities or actualities. You jot down your responses, recalling the assurance of the test directions that there are "no wrong answers"; you tally your answers with the guide provided and are told you have a preference for "intuition." One week later, flipping through a trade journal or business magazine, you encounter a quiz that asks you to circle particular boxes if you "believe that a logical step-by-step method is best for solving problems" or, conversely, if you "rely on intuitive hunches and the feeling of 'rightness' or 'wrongness' when moving towards the solution of a problem."[68] It is through these kinds of tests, featured in trade journals or given at management training seminars, that managers encountered intuition. The tests went by dozens of acronyms—the AIM, the HBDI, the HIP—but by far the most well-known measure of intuition was the MBTI.

The MBTI was a general personality test that assigned each individual a "type" based on four scales: extraversion/introversion, thinking/feeling, judging/perceiving, and most importantly for this paper, intuition/sensing. The MBTI's version of intuition drew on the work of psychoanalyst Carl Jung, whose 1922 *Psychological Types* described intuition as a form of unconscious perception of the realm of images, symbols, ideas, and abstractions.[69] Its opposite was sensing: perception of the empirical world through the five senses. Intuitive

[66] Cinla Akinci and Eugene Sadler-Smith, "Intuition in Management Research: A Historical Review," *International Journal of Management Reviews* 14, no. 1 (2012): 114.

[67] Peter Drucker coined the term "knowledge worker" to refer to workers who dealt in manipulation of symbols and ideas. Drucker, *Landmarks of Tomorrow* (New York, 1959).

[68] One can find variants of these questions in numerous surveys, including the Human Information Processing Survey. William Taggart and Enzo Valenzi, "Assessing Rational and Intuitive Styles: A Human Information Processing Metaphor," *Journal of Management Studies* 27, no. 2 (1990): 149–72; Eugene Raudsepp, "How Creative Are You?" *Personnel Journal* 58, no. 4 (1979): 218–19.

[69] Carl Jung, *Psychological Types* (Princeton, N.J., 1971).

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people—in contrast to "sensors"—preferred abstract ideas over concrete facts, potentialities over actualities, future over present, and holistic over sequential decision making.[70] According to this theory, everyone had a dominant mode of perception, either intuition or sensing, which was their most comfortable and natural way of perceiving the world. First developed by amateur psychologist Isabel Briggs Myers in the 1940s and 1950s, the MBTI was adopted by researchers in creativity, brain lateralization, and decision making from the 1960s to the 1980s. As this paper will show, these three zones were all important sites for the development of techniques for studying intuition. By the 1980s, the MBTI had found its most enthusiastic audience in corporate America due to its ability to distill complex psychological ideas into a straightforward description of intuition that had practical implications.[71] But before arriving at corporate America, let us turn to an early site where attributes of intuition were articulated: creativity research.

Candidates arrive at a converted fraternity house on the Berkeley campus of the University of California for a long weekend. From the first morning to the final evening, they are subjected to a barrage of interviews, simulations, and psychological tests—including the MBTI, or what one subject called a "distressing questionnaire" by "two Jungian ladies."[72] After a day of testing, interviews, and games, the subjects come together for dinner and cocktails, still under the watchful eye of participant-observer psychologists who will later turn test scores and scribbled notes into candidate profiles. The participants are gathered from various professions across the arts and sciences, from poets to mathematicians, but apparently sharing one trait in common: creativity. This vignette describes a method developed at Berkeley's Institute of Personality Assessment and Research (IPAR) in the 1950s to study the successful creative personality. IPAR's roots, like much of twentieth-century psychology, lay in World War II, when the Office of Strategic Services commissioned psychologists Donald MacKinnon and Henry Murray to develop methods for officer selection.[73] Their assessment

[70] Isabel Briggs Myers, *The Myers-Briggs Type Indicator Manual* (Palo Alto, Calif., 1962); Isabel Briggs Myers, *Gifts Differing* (Palo Alto, Calif., 1980).

[71] The MBTI from the start faced skepticism from mainstream psychology, including staff psychologists at its first publisher, Education Testing Services (ETS). Myers's dissatisfaction with ETS led her to seek another publisher, Consulting Psychologists Press, in 1975. Frances Saunders, *Katherine and Isabel: Mother's Light, Daughter's Journey* (Palo Alto, Calif., 1991); Lawrence Stricker and John Ross, "Intercorrelations and Reliability of the Myers-Briggs Type Indicator," *Psychological Reports* 12, no. 1 (1963): 287–93.

[72] Beat poet Kenneth Rexworth gave a colorful, and critical, firsthand account of being studied at IPAR. Rexworth, "My Head Gets Tooken Apart," *The Nation*, Dec. 1957.

[73] From the beginning, candidates were assessed not just by formal techniques, but also on informal social behavior. According to Henry Murray and Donald MacKinnon's description, "a convivial evening party was held with hard liquor for both candidates and staff. . . . The party

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center method, which included a battery of psychological tests, was soon transported to corporations as a method for assessing job candidates and potential managers.[74]

Importantly, IPAR was one of the first adopters of the MBTI for psychological research, finding particular value in the intuition scale.[75] Although they distinguished creativity from intuition, IPAR researchers found a high correlation between the two qualities, particularly as measured by the MBTI scale.[76] At a conference run by MBTI publishers, IPAR psychologist Harrison Gough reported interesting results about the distribution of intuition types among creative people.[77] Intuition, usually the rarer mode of perception in the general population (found in 25 percent of people), was preferred by 90 percent of creative personalities across a range of professions. Creative people, the studies found, reveled in paradox, ambiguity, potentiality, and complexity—the precise forms of perception associated with intuition. As Gough noted, "The person scoring high on [intuition] favors fantasy and the abstract to factuality and the concrete, likes imaginative more than sober-minded people, values possibilities more than probabilities, and prefers theories to facts."[78] In addition to scoring highly on intuition scales, creative people were more likely to prefer complex figures to simple figures and more likely to display independence of judgment—and therefore were less likely to subscribe to conformist ways of thought.[79] Creativity and intuition were thus both defined in opposition to conformity, a topic of acute social and scientific concern in post–World War II America.[80]

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which lasted usually long past midnight often revealed aspects of the candidates' personalities not seen in soberer states." Murray and MacKinnon, "Assessment of OSS Personnel," *Journal of Consulting Psychology* 10, no. 2 (1946): 79.

[74] The first corporate use of the assessment center was at AT&T, a program run by psychologist Douglas Bray.

[75] MacKinnon met Isabel Briggs Myers while he was teaching at Bryn Mawr in the late 1940s; he subsequently brought the Myers-Briggs to IPAR.

[76] On the history of creativity, see Michael Bycroft, "Psychology, Psychologists and the Creativity Movement," in *Cold War Social Science*, ed. Mark Solovey and Hamilton Cravens (New York, 2012); Jamie Cohen-Cole, "The Creative American: Cold War Salons, Social Science, and the Cure for Modern Society," *Isis* 100, no. 2 (2009): 219–62.

[77] Gough is an important figure in the history of psychological testing, as one of the creators of the widely used California Psychological Inventory, which he developed at IPAR.

[78] Harrison Gough, "Studies of the MBTI in a Personality Assessment Research Institute" (paper presented at the Fourth Biennial MBTI Conference, Stanford, 1981), Isabel Briggs Myers Memorial Library, Center for the Association of Psychological Type, Gainesville, Florida.

[79] IPAR, *Measures of Independence and Conformity*, 1955, RG 1.2, subseries 205, box 3, folder 20, Rockefeller Foundation records, Sleepy Hollow, New York.

[80] Many psychologists sought to experimentally study conformity and obedience. In his doctoral work with Solomon Asch, IPAR researcher Richard Crutchfield had found that subjects under (false) social pressure would err in judging the length of lines. Even more dramatically, Stanley Milgram's 1963 experiment on obedience to authority seemed to show that

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The theories of creativity and techniques developed to study the creative personality at IPAR helped bring the Myers-Briggs Type Indicator to the attention of psychologists and management researchers.[81] The first large-scale empirical study of managerial intuition using the MBTI in the 1980s was conducted by consultant Weston Agor, who administered the intuition scale to over two thousand managers across corporate and government organizations.[82] Psychological tests, he suggested, were particularly helpful in launching conversations about intuition among managers who might be more familiar with analytic methods. Agor found preference for intuition to be correlated with higher positions on the management hierarchy; for him, this served as evidence that top managers attained their position *because of* intuition.[83] Intuitive leaders were visionary leaders, able to see the big picture and to mobilize people in accordance with their vision, but ill suited for detail-oriented, routine tasks. Throughout his writings in popular magazines and business journals, Agor consistently argued that intuition had a logic of its own and an importance as a form of creative decision making that was ideal for the knowledge economy.[84] In the next section, we will see how consultants such as Agor claimed that intuition could be cultivated among managers.

ordinary individuals were willing to inflict pain on innocent strangers under pressure from an authority figure. In public discourse and psychological research, conformity was connected to the authoritarian regimes of Nazi Germany and Soviet Russia. Theodore W. Adorno, Else Frenkel-Brunswik, Daniel J. Levinson, and Nevitt Sanford, *The Authoritarian Personality* (New York, 1950); Stanley Milgram, *Obedience to Authority* (New York, 1974). Historian Jamie Cohen-Cole argues that the "open-minded self," understood as a tolerant, flexible, and creative subject, became an ideal model for the democratic subject in Cold War America as an antidote to this concern with the conformist personality. Cohen-Cole's argument suggests that intuition, as a mode of knowing that trusted the "mind's eye," rather than blindly following business or political leaders, emerged in contrast to the conformist personality. Cohen-Cole, *The Open Mind: Cold War Politics and the Sciences of Human Nature* (Chicago, 2014).

[81] Ironically, William Whyte's *The Organization Man* identified corporate psychological testing as a force for creating homogeneous, conformist corporate peons. The appendix, "How to Cheat on Personality Tests," even urged test-takers to offer the most boring, conventional responses to avoid being screened out for psychological abnormalities. However, a psychological instrument like the Myers-Briggs Scale, claimed to measure, and celebrate, the precise kind of traits—creativity and intuition—that Whyte feared were being stamped out by personality testing. Whyte, *The Organization Man* (Garden City, N.Y., 1956).

[82] Weston Agor, "The Logic of Intuition: How Top Executives Make Important Decisions," *Organizational Dynamics* 14, no. 3 (1986): 5–18.

[83] One could argue, however, that higher-level managers had more latitude to make the kinds of decisions associated with intuition. But what is of interest here is how intuition was credited with managerial success.

[84] Agor, "Logic of Intuition."

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Training Intuition

Although the MBTI framed intuition as an individual personality trait, consulting psychologists claimed that intuitive problem solving was a universal mode of reasoning that could be taught through training seminars.[85] Psychological tests, including the MBTI and adapted variants of it, were a key part of these seminars. Agor, for example, offered programs in "brain skill management" that cultivated intuition at both the individual and organizational levels. As a name like "brain skill management" suggests, such courses drew on the cultural cachet and scientific prestige of neuroscience. Most frequently cited was Nobel Prize–winning research into brain lateralization, which showed that distinct forms of information processing took place in the right and left hemispheres of the brain.[86] The "right brain"—posited as the seat of nonanalytical, holistic thought—became almost synonymous with intuition in management literature.[87] Taking up the language of neuroscience and of the MBTI was the Herrmann Brain Dominance Instrument (HBDI), a tool created in the late 1970s by Ned Herrmann, former training director at General Electric to measure hemispheric preference.[88] Like the MBTI, the HBDI was based on the notion that everyone has a dominant cognitive style, discernable through the questionnaire, that influences career choices and aptitude; through training, however, people were able to acquire the cognitive traits of their weaker hemisphere. And as Herrmann argued, creativity and good management alike demanded the ability to tap into different cognitive modes and attain "whole brain thinking." Intuitive problem solving, in this model, entailed an iterative tacking back and forth between hemispheres: the intuitive manager was one who had the ability to integrate the right

[85] On the history of consulting, see Christopher McKenna, *The World's Newest Profession: Management Consulting in the Twentieth Century* (Cambridge, U.K., 2006).

[86] Some management researchers used novel EEG technology to measure brain waves, attempting to localize intuition in the brain itself. However, such technology was expensive, slow, and impractical. In studies by Robert Doktor and William Taggart, e.g., the brains of different professionals—CEOs and operations researchers, accountants, and artists—were scanned to find a neurological basis for the different cognitive styles associated with such professions. See Robert Doktor and David Bloom, "Selective Lateralization of Cognitive Style Related to Occupation as Determined by EEG Alpha Asymmetry," *Society for Psychological Research* 14, no. 4 (1977): 385–87; and William Taggart and Daniel Robey, "Measuring Managers' Minds: The Assessment of Style in Information Processing," *The Academy of Management Review* 6, no. 3 (1982): 375–83.

[87] See, e.g., Henry Mintzberg, who suggested that the right hemisphere was the seat of visionary corporate strategies: "Creative, integrated strategies seem to be the products of single brains, perhaps of single right hemispheres." Mintzberg, "Planning on the Left Side and Managing on the Right," *Harvard Business Review*, July/Aug. 1976, 56.

[88] A conference on the MBTI hosted a talk on an early version of the HBDI, the Herrmann Participant Survey, which was used alongside the MBTI as a part of training programs for project managers in the federal government.

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hemisphere's "intuitive flash" with the left hemisphere's analytic ability to implement this intuitive insight.[89]

By the mid-1980s, consulting firm Herrmann International had administered the HBDI to hundreds of thousands of workers at corporations including Shell, Proctor & Gamble, IBM, American Express, Microsoft, and AT&T.[90] Activities at seminars included problem-solving tasks, where groups were formed based on HBDI scores. One particularly evocative training seminar took place at a lakeside retreat attended by Shell executives who sought to develop a new corporate strategy. Participants were asked to build a physical model of their problem using wood, wire, and feathers; they then rowed to the middle of a lake, to generate metaphors from nature, and then hiked to overlook the lake, to get a new perspective, before remodeling their problem with fresh eyes.[91] Executives, once trained in intuition, would return to their companies with novel insight into problems and new strategies for structuring the organization.[92]

Intuition, though an individual mode of perception, required organizational restructuring to be elicited. Proponents of intuitive management advocated for a relaxed, collaborative, participative, and communicative managerial style supported by a flexible organizational structure that tolerated complexity, messiness, and even chaos.[93] Consultants urged corporations to use psychological test scores as the basis for reorganizing teams, cutting across traditional department lines to mix different cognitive styles: intuitive managers would brainstorm ideas, whose practicality could be assessed by more linear-thinking managers.[94] The result would be, as Herrmann put it, a "composite whole brain staff, which then has the capability of synergy within the organization."[95] Agor suggested that

[89] Ned Herrmann, "The Creative Brain," *NASSP Bulletin* 66, no. 455 (1982): 31–46.

[90] Ibid.

[91] Described in Laurie Nadel, *The Sixth Sense: The Whole Brain Book of Intuition* (Upper Saddle River, N.J., 1990), chap. 6.

[92] This approach slowly started to appear in business schools, too. Some business schools developed courses to emphasize intuitive, creative thinking rather than the analytic thinking that pervaded the business school curriculum. Such courses incorporated unconventional techniques, like I Ching, guided meditation, and collaging to unleash creativity as a route to organizational innovation. William Taggart, Daniel Robey, and Barbara Taggart, "Decision Styles Education," *Exchange: The Organizational Behavior Teaching Journal* 7, no. 2 (1982): 17–24. Stanford offered "Creativity in Business," the first full course devoted to creativity in business. Eric Berg, "Zen and the Stanford Business Student," *New York Times*, 30 Jan. 1983.

[93] In the 1960s, management theorists and consultants advocated participatory management as an alternative to hierarchical, top-down management structures, as a way to give workers a sense of participation and responsibility in work. Douglas McGregor, *Human Side of Enterprise* (New York, 1960); Eugene Raudsepp, "Establishing a Creative Climate," *Training and Development Journal* 41, no. 4 (1987): 50.

[94] Weston Agor, "The Measurement, Use and Development of Intellectual Capital to Increase Public Sector Productivity," *Personnel Management* 26, no. 2 (1997): 175–86.

[95] Ned Herrmann, "The Creative Brain II: A Revisit with Ned Herrmann," by Elizabeth Shey Gorovitz, *Training and Development Journal* 36, no. 12 (1982): 82.

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intuition training was especially important in organizations with limited resources due to budget shortages, downsizing, or outsourcing, as it allowed companies to extract more productivity out of existing employees —like public-sector organizations. The intuitive human mind, Agor declared, "is potentially the most important single resource an organization has for its present and future survival"—a resource that, if properly cultivated, could serve as a "boundless source of enhanced productivity."[96] Moreover, as we will see in the final section, proponents of intuitive management argued that intuition was particularly important in knowledge work, where productivity was defined in *mental*, rather than physiological, terms.[97]

Information Processing

As I have shown, proponents of intuitive management sought to legitimize intuition by grounding it in neuroscientific research and psychological techniques. Psychological tests like the MBTI, by making intuition measurable and commensurable, helped consultants overcome business skepticism about its ineffable nature. But to understand how intuitive management came to prominence, one must widen one's scope to the broader economic context of late-twentieth-century America. Intuition's purchase in corporate America is connected to a variety of cultural and economic factors, ranging from the influence of countercultural movements and humanistic psychology, which popularized alternative modes of consciousness, to the older tradition of human relations management, which emphasized the emotional and interpersonal dynamics of work.[98] One salient context for the turn to intuitive management was the widespread conviction that America was entering the knowledge or information economy. The editors of *Intuition at Work* even proclaimed that 1975 marked the inauguration of the "intuition industry"—an age defined by "the replacement of mind over matter and brute strength as the primary economic resource."[99] Intuition was

[96] Weston Agor, "Managing Brain Skills to Increase Productivity," *Public Administration Review* 45, no. 6 (1985): 864; Agor, "Intellectual Capital," 176.

[97] Herrmann, "The Creative Brain II," 82; Agor, "Managing Brain Skills."

[98] Leavitt, "Beyond the Analytic Manager." On the history of humanistic psychology, see Jessica Grogan, *Encountering America: Humanistic Psychology, Sixties Culture, and the Shaping of the Modern Self* (New York, 2012); Jenna Alden, "Bottom-Up Management: Participative Philosophy and Humanistic Psychology in American Organizational Culture, 1930–1970" (PhD diss., Columbia University, 2012). On human relations, see Richard Gillespie, *Manufacturing Knowledge: A History of the Hawthorne Experiments* (Cambridge, U.K., 1991).

[99] Roger Frantz and Alex Pattakos, "Introduction," in *Intuition at Work* (San Francisco, 1996), 138.

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framed as a mode of cognition particularly suited for the knowledge economy.

Proponents of intuitive management challenged the dominance of analytic and quantitative reasoning methods in business, a legacy of management science's roots in military planning and operations research.[100] The analytic approach to problem solving entailed breaking down problems into their components, searching for operational decision rules, and ordering alternatives in a consistent, logical fashion to arrive at the optimal decision.[101] New cognitive science research into heuristics and biases in reasoning levied several critiques against this model, namely, that it assumed resources (of information, time, money, and cognitive capacity) that did not exist.[102] Noted management theorist Herbert Simon treated intuition as a heuristic that humans used to cope with their inherent constraints on information processing—their "bounded rationality."[103] Intuition was a cognitive, although unconscious, process, which used pattern recognition and past experience to make a rapid decision, without following a logical, sequential order.[104] The paradigmatic example of intuition for Simon was a chess master, who was able to quickly decide on a move in a complex board, without consciously performing all the calculations that would be required to logically deduce the correct play.

Cognitive science research into decision making in the 1980s is one zone where intuition became legitimized, not as a personality trait, but as a universal form of information processing that had a legitimate and important role in management.[105] As James McKenney and Peter Kean argued in a *Harvard Business Review* article, intuition was well situated for decision making in situations either with too much or not enough data or with environmental uncertainty—for example, forecasting consumer tastes.[106] Far from a mysterious or sloppy method,

[100] This was encouraged by Ford Foundation funding of business schools in the 1950s, which prioritized quantitative methods. On business education, see Rakesh Khurana, *From Higher Aims to Hired Hands* (Princeton, 2010); and Hunter Heyck, *Herbert A. Simon: The Bounds of Reason in Modern America* (Baltimore, 2005).

[101] Leavitt, "Beyond the Analytic Manager."

[102] Daniel Kahneman, Paul Slovic, and Amos Tversky, eds., *Judgment under Uncertainty: Heuristics and Biases* (Cambridge, U.K., 1982); Akinci and Sadler-Smith, "Intuition in Management Research," 114.

[103] Heyck, *Herbert A. Simon*; Stephanie Dick, "Of Models and Machines: Implementing Bounded Rationality," *Isis* 106, no. 3 (2015): 623–34.

[104] Herbert Simon, "Making Management Decisions: The Role of Intuition and Emotion," *Academy of Management Executive* 1, no. 1 (1987): 57–64.

[105] Akinci and Sadler-Smith, "Intuition in Management Research."

[106] James McKenney and Peter Keen, "How Managers' Minds Work," *Harvard Business Review*, May/June 1974, 79–90. Marketing and advertising both have a long history of entanglement with psychology; see Michael Pettit, *The Science of Deception* (Chicago, 2013).

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intuition had an "underlying discipline at least as coherent as the systematic mode."[107]

It is not coincidental that the language of information processing emerged at a moment of the widespread introduction of computing into corporations, one of the most salient contexts for the turn to intuition.[108] Computers raised theoretical and practical questions for cognitive scientists and management theorists alike about which capacities were uniquely human and which could be outsourced to machines. Computers produced endless data and models, which had to be integrated into corporate decision-making structures; whole new professions (IT specialists) emerged, while other jobs were taken over by computers, including many of the procedural tasks posited as the antithesis to intuition.[109] As Bregje van Eekelen argues, the history of creativity must be understood in relation to the history of automation: "Thinking outside the box was what computers and assembly lines couldn't do."[110] So too must we understand the history of intuitive management, which promised that the human mind was uniquely capable of deciphering patterns in masses of information. Intuitive management called for a labor of visionary leadership that could not be outsourced to computers or clerical staff.

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[107] McKenney and Keen, "How Managers' Minds Work."

[108] On technology in the workplace, see Thomas Haigh, "Inventing Information Systems: The Systems Men and the Computer, 1950–1968," *Business History Review* 75, no. 1 (2001): 15–61; Michelle Murphy, *Sick-Building Syndrome and the Problem of Uncertainty* (Durham, N.C., 2006), chap. 2; and John Harwood, *The Interface: IBM and the Transformation of Corporate Design* (Minneapolis, 2011).

[109] Jennifer Light, "When Computers Were Women," *Technology and Culture* 40, no. 3 (1999): 455–83; Herrmann, "The Creative Brain."

[110] Bregje van Eekelen, "The Social Lives of Ideas: Economies of Knowledge" (PhD diss., University of California, Santa Cruz, 2010), 221.

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