

PREFACE

This book has been many years in the making, with roots extending far back in my development. The path to it has encompassed much, much far from evident in the pages to follow. Here I present some notes about my process of development through which I have come to write it. In my sophomore year in college at Stanford, in my initial engagement with the social sciences, it occurred to me, as a natural framework of analysis, to focus on the way in which individuals are guided by their culture, specifically ideals and information they glean or that is transmitted to them, in their work, through which they come to make the particular contributions to their society that they make. I wrote a number of papers connected with this idea and framework, including one in which I set forth a model in which ideals guide individuals in their work and the cultural development of ideals is in turn driven by individuals' needs in their work and the social evaluation of their work, and another about prehistoric cave painting and possible principles of representation that may have guided prehistoric peoples in their artwork, rooted in their psychological orientation to nature. But I did not move forward in developing the framework in any direct way. Looking back, the framework and viewpoint had, very likely, roots in my earlier development. I read innumerable biographies growing up — of explorers, frontiersmen, presidents, sports heroes, and a wide array of historical figures — surely not especially unusual. In part also my thinking about social science was rooted in my approach to literature. I recall telling a friend of mine in high school that I naturally gravitated, in interpreting literature, to focus on the basic theme of “the individual and society”; I was interested in this theme, for example, in the novels of Thomas Hardy, *A Portrait of the Artist*

x *as a Young Man, The Stranger, and Aristophanes' The Clouds.* There may have been connections, too, with my interests in mathematical modeling and computer programming. I did a science project in high school measuring air pollutants and was interested in building models combining observations made at different locations to calibrate a regional atmospheric air quality model. However, these links are all rather tentative; the path begins most clearly in my view, looking back, in college, with my first true engagement with social science and my rudimentary conception of individuals guided by their culture in their work and activity.

Lacking a clear sense of how to pursue the approach that seemed intuitive to me for modeling individuals in their culture and society, grasping it only tentatively, and with it seemingly outside of the standard social science models and approaches I was learning, I left it aside. I majored in economics — attracted, I think, by the idea of aggregating individuals to form a market, which resonated with me, and by the formal modeling. In the last years of college and the years following, a number of interests and ideas gained my focus of attention. I wrote my college honors thesis on an idea of individuals embedded in a network — a different focus, but in some way I think connected with my earlier idea. I worked for a firm in law and economics, developing an interest in this field, and also in learning how to forge a direct connection from a theoretical model to its empirical estimation. I pursued a Ph.D. in economics — my dissertation presents an econometric model addressing the problem of incomplete detection of violations of laws and regulations; and accepted a position as an assistant professor at the Stanford University Graduate School of Business.

In the spring of 1990, two and a half years after returning to Stanford, sensing the need to find a new direction, perhaps more aligned with my earlier interests and way of thinking about individuals and culture, I initiated as a loose intellectual activity exploration in the general domain of, as I described it to myself, “technology and values.” I spent the second half of the summer and the fall in New Haven on leave. During this period I began to read more widely, especially about conceptions of freedom and liberty, which struck me as the value least integrated into traditional kinds of models in economics. Beginning in the winter of the following year, I embarked upon a wide course of reading, mainly in philosophy at first. This reading continued through that year and the following year, when I was fortunate to have a fellowship at the National Bureau of Economic Research, which enabled me to pursue reading intensively, along with more traditional economics research. My reading expanded into parts of psychology, especially psychological research concerning values and object relations theory. I relocated to the Yale School of Management in 1992. My wife

Leslie and I were married in 1991, and were fortunate to gain positions both at Yale; at Yale I continued to read fairly widely.

Looking back, I realize that during this period I not only learned a great deal — basic concepts, theories, intellectual and cultural history, and different approaches to social theorizing, but also was finding the biographical details about the individuals whose works I read intrinsically interesting. I read biographical details with interest and often sought out details about a person's path of development. However, I did not focus on this — it was in the background. One branch of my reading focused on social activists: I read about abolitionists and reformers of the nineteenth century and, spurred by coteaching a course in environmental management with Sharon Oster, read about environmentalists as well as personal narratives written by environmentalists. Through this period I thought most about modeling ideals and values in a social setting, especially ideals that are or may be useful to individuals in their productive activities. I read and thought about virtues, including wisdom, tolerance, and honesty, and qualities such as creativity and idealism, and how these are and may be used and combined in social systems. I also wrote a note, in December of 1992, on individuals' conceptual inner worlds and the relative "positions" in these worlds of objects they have internalized and built up representations of, a harbinger of things to come. But the pieces did not fit together and I remained unclear as to how to proceed.

I achieved a sort of breakthrough, not so much of ideas as a clear focus, in the summer of 1995. This breakthrough occurred shortly after I read Gananath Obeyesekere's book *Medusa's Hair*. I cannot know definitely the role this book had in my conceiving my idea of the topic to focus on, but the breakthrough seems to me connected with the book. Obeyesekere describes Hindu-Buddhist religious enthusiasts who, in leading their highly individualistic lives, develop personal rituals and symbols that embody and reflect at a personal level fundamental values and beliefs of their religion. The book struck me in showing, for a handful of individuals, how they interpreted and made use of cultural values in their own idiosyncratic, individualized ways. Having wrestled with the question of how to study the ways in which values and ideals are useful to people in their work, through which they come to make contributions to society, it occurred to me to study as a topic how individuals engaged in creative endeavors are guided in their work by cultural values and guiding principles. I chose creativity because in our society we explicitly acknowledge the individuality of each person in the realm of creativity — that creative contributions individuals make are distinctive to them — whereas in other realms this link is less fully acknowledged; and I wanted to study how individuals, drawing on the common cultural pool of values and principles, are guided and function in

xii their work and thereby come to make their distinctive contributions. The link back to my first intuitive response to social science is clear — and was clear to me within a short period of time.

I worked for about a year striving to develop a model describing individuals engaging in creative work, guided by values and principles. My focus, different than in this book, was on creative projects; I focused on how cultural values and principles guide individuals in their choices about which projects to pursue and in defining projects and making revisions to them. I recognized that my focus naturally extended to linkages of cultural transmission, but did not pursue this as much. During this time I also gained more familiarity with the creativity literature. From the beginning I recognized the need to model the creative process as unfolding over time and in stages. But beyond that general insight, which is connected with the description in this book, I did not make much useful progress.

At this point, in the spring of 1996, I decided that as a way to learn more about how individuals go about engaging in creative endeavors I would interview a set of individuals in different fields about their creative development and work. As a practical approach I decided to interview individuals who had recently earned doctorates. I chose two fields initially, literary studies and neuroscience; later I added mathematics and a small group of filmmakers and playwrights, developed a sampling strategy, which I describe in Chapter 1, and embarked upon the series of interviews that form one important empirical basis of the description of creative development in this book. For every individual I interviewed I read their dissertation (for the filmmakers I viewed films they have made, for the playwrights I read plays they have written). I also read relevant background materials; for example, if a literary scholar had focused on a few main literary works, I read those, or relevant parts, before our interview; and gathered additional archival source materials such as dissertation prospectuses. I was on leave from Yale over 1996–97, which was crucial in giving me the time to conduct many interviews and do necessary background work, transcribe the interviews, and begin tentatively to make sense of what I was being told and learning.

At the same time as I engaged in interviewing, and after finishing the bulk of the interviews drawn upon in this book, I read, and continue to read, in the biography literature and source materials of individuals famous for their creative work. I had been familiar with Frederic Holmes's outstanding biography of Hans Krebs, and returned to it as one of the first biographies I read. I also began to read Virginia Woolf's great store of writings — her diaries, published early journals, letters, short stories, essays, and fiction, concentrating, as I have consistently for most individuals, on her work as a young adult and relatively

early on in her career, leading to her creative break in late 1919 and early 1920, and her great novels written in the ensuing years. Over time I have read many biographies and primary source materials of many individuals famous for their creative work, gaining steadily a greater store of knowledge; I draw on these biographies and source materials in this book as a second main empirical basis of my description. xiii

Out of and growing from these empirical bases, rooted in them, I have fashioned a theoretical description of creative development. This description has, I believe, the strength of coherence; it provides an integrative framework for thinking about and describing the creative development of individuals in many fields. Without doubt it has also significant flaws and limitations. Some, I am sure, will view it as too sweeping, as seeking for a false generality, some as simply wrongheaded; others will decry it as making only very limited progress. Further, its empirical basis, though broad and in some sense deep, has evident weaknesses and shortcomings. I present it in the belief that its basic structure is sound and the direction in which it points is well worth pursuing, and in the hope that future work, to which it may contribute, will make right its failings and weaknesses, clarify its structure and significance, and overturn it in various aspects, thus going beyond it.

The importance of the description and approach in this book in my view lies not just in its value as a description of creative development. It has also an ideological meaning and value, and importance as a critique. For too long the social sciences have been constructed employing approaches that do not reflect and are not in dialogue with our fundamental cultural value of individualism. Social science models do not describe individuals in their distinctiveness or individuals' unique paths of life and development, at least not in deep ways. And social scientists do not study the significance of individuals' unique paths and distinctiveness for their contributions to society. There has been surprisingly little effort made to grapple with the difficult matter of constructing models of social systems in which individuals, in their distinctiveness and unique paths, are represented and linked together. My purpose here is to take one step, and glimpse further steps ahead, towards the development of such an approach — models of individuals in social systems that reflect and thus support and help sustain us in our culture, with its values of individualism and individual freedom and initiative.

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