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Editors

Cristina M. Giannantonio, Ph.D.

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A Festschrift in Honor of
James L. Doti and Lynne P. Doti

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Introduction

President James (Jim) L. Doti's announcement that he was stepping down from his position – in combination with the retirement of his wife, longtime Professor Lynne P. Doti – was a momentous event in the recent history of Chapman University. Lynne joined Chapman in 1971 and a few years later, in 1974, Jim joined the university as a young assistant professor. Interestingly, it was a search committee composed of Lynne and Professor Don Booth that recruited Jim Doti from Chicago. Only a few years later, in 1977, Jim and Lynne were married. This academic love story would be interesting by itself, but the rapid ascent of Jim to Dean of the Argyros School of Business and Economics and later to President of Chapman, transformed this academic couple into the powerful team that, in different ways, enriched the university for years to come.

Jim, the Donald Bren Distinguished Chair in Business and Economics was Dean of the Argyros School from 1985 to 1988, when, after the long and successful presidency of Dr. G.T. Smith, he was selected as Interim President. The university, in keeping with traditional best practices, entered into a national search that led to the appointment of Dr. Allen Koenig as the 11th President of Chapman University. Two years later, the Board called again on Jim, and he became the new President, a position he has now held for 25 years, and will hold until September 1st, 2016. This is not the place for a description of his many accomplishments, but it should suffice to say that these have been transformational years for Chapman University, which moved – as an example – from 61st to 7th in the U.S. News and World Report rankings during that period.

Lynne, on the other hand, established herself quickly as a major presence in the Argyros School. She received tenure in 1980, was promoted to full professorship in 1990, was appointed the David and Sandra Stone Professor of Economics, and served as the director of the Leatherby Center for Entrepreneurship and Ethics. A prolific author with a specific expertise in the history of economic institutions, she was also one of Chapman's most appreciated teachers, both tough with and supportive of her students. Together, Jim and Lynne came to represent the university so that for many, Chapman University really is Jim and Lynne.

These circumstances did not make it easy for us to plan a tribute to these extraordinary individuals. We did not want to collect a 'book of letters', but rather, in the best academic tradition, we wanted to have a collection of papers that would reflect, with their scholarly inclination, the various roles that Jim and Lynne have played over the years. We were looking for contributors willing not simply to express their affection and regard for Jim and Lynne, but to demonstrate this affection and regard through an intellectual contribution.

We were impressed at how quickly the colleagues we contacted responded. This was an indication of the respect that the Dotis command in the academic community. We were also impressed at the variety of contributions that we received. We decided therefore to arrange the contributions according to three themes.

The first five papers were written with the perspective of what it means to run a large organization such as a university: what are the characteristics of a successful leader and how do they translate into action. Three Trustees from the Chapman

University Board contributed papers (Chuck Martin, Mark Chapin Johnson, and the current Chairman of the Board, David Janes), together with Chapman's Executive Vice President for Advancement, Sheryl Bourgeois (whose doctoral dissertation focuses on this same topic), and economic historians Jason Taylor and Richard Vedder.

A second group of papers, more theoretical, focuses on banking and entrepreneurship, with articles that pay homage to the research legacy of Lynne Doti. The contributors include Chapman's own Cristina Giannantonio and Amy Hurley-Hanson (colleagues of Lynne in the Argyros School), as well as longtime friends and associates of Lynne, Michael Gou, Daniel Giedeman, and Janice Traflet.

The final group of papers hearkens back to economics, and include an article by 2002 Nobel Laureate Vernon Smith, whose hire in 2007 represented a critical success in the strategy to grow the academic imprint of the university, an article by Daniele Struppa, Chancellor (and Presidential successor of Jim) whose article is coauthored with Anja Kruslin, an undergraduate student at Chapman, in keeping with Chapman's emphasis on engaging its students in research, and finally an article by a former coauthor of Jim, Dwight R. Lee.

All-in-all, we are proud to present a special issue of the *Journal of Business and Management* that reflects the multiple and intertwined interests of Jim and Lynne. We hope that this tribute will be a pleasure for them to read, and will contribute to the growth of the disciplines it represents.

Cristina M. Giannantonio, Amy E. Hurley-Hanson, Daniele C. Struppa
Chapman University • Orange, CA • July 2016

Presidential Leadership

The Presidency in Higher Education

Sheryl Bourgeois
Chapman University

*Faster than a speeding bullet. More powerful than a locomotive.
Able to leap tall buildings in a single bound.*

Building a great university has always been difficult, and it is all the more so today. It requires many things, including, perhaps, *powers and abilities far beyond those of mortal men*.

First, there must be an interest in and demand for your academic programs. Then, you must have respected and dedicated faculty; preferably those who are prolific writers, love to teach and engage in cutting-edge research, while actively encouraging students to join them on the journey. Finally, you must have a campus that is handsomely appointed with the latest teaching tools and technology, not to mention residence halls and fitness centers that rival the hottest five-star resorts.

Of course, none of this comes to life without great students; ideally, those who have high grade-point averages and off-the-chart SAT scores, who are at the top of their class and demonstrate leadership in their field of study. If they are Olympic gold medal-winning athletes or if they can play the piano like Lang Lang, so much the better.

Not too difficult so far, you say – but we're not finished yet. The final piece is also the most challenging.

To bring these sometimes combustible elements together and manage them to the desired effect, the institution must have that rare superhuman leader who has a brilliant, compelling vision and who can: attract seven-figure gifts on a regular basis; enlist passionate, generous board members; recruit, motivate, and retain faculty and staff; enroll gifted students; provide insightful editorials on current local, national and international events; and, in his or her spare time, ameliorate neighborhood issues.

For the last 25 years, Chapman University has had such a leader in James (Jim) L. Doti. Thus, it is no surprise that the Chapman College for which he assumed leadership in 1991 has now become thriving Chapman University, one of the leading midsized universities in the nation.

During Doti's storied tenure, Chapman grew from a liberal arts college with

2,200 students to a university with more than 8,000. It launched schools of law, film and pharmacy, as well as Irvine-based Brandman University, which focuses on adult professional education.

To achieve its almost unparalleled success, substantial funds were needed, and Doti delivered. Chapman's endowment grew by 880% as Doti inspired hundreds of millions of dollars in donations, including the five largest gifts in institutional history.

Perhaps the most visible sign of change during Doti's time in office was Chapman's physical plant, which has been completely transformed. It grew from 18 acres to nearly 90 acres, while going through a massive redevelopment that added nearly three million square feet of academic space. Chapman's campus is now the envy of every college administrator who visits it.

Many of Chapman's improvements have been accomplished through thoughtful strategic planning, hard work, careful fiscal management, volunteer support and the immense generosity of alumni, board members and friends. Most of the new facilities constructed during the last three decades were funded primarily through gift income.

In many respects, philanthropy has been the biggest driver of transformational change at Chapman—but this is not uncommon in the world of higher education. Philanthropic support has become the primary source of revenue for most universities, public and private. Yet most new presidents say “fundraising is the area they are least prepared to take on” when they assume their leadership positions (Cook, 2012, p. 2).

Furthermore, many new presidents are lacking in the myriad (and ever-changing) skills now required for institutional leadership. Indeed, the role of college or university president is Herculean by any definition.

As we celebrate and pay tribute to Jim Doti's extraordinary tenure as one of higher education's finest leaders, we also have the opportunity to reflect on the magnitude of what it now takes to fill the top seat at most colleges and universities. This article will highlight key literature on the subject, describing the expectations, requirements and demands of a university president early in the 21st century.

Desperate Times Call for Desperate Measures

Powerful social, economic, technological, and political forces are driving change at a daring new pace, and as a result, higher education is at a crossroads. Colleges and universities are expected to do more than ever before—and they have fewer resources with which to do it. Leading these complex organizations is more challenging than ever. Yet, the very conditions that create such challenges also provide a rare opportunity for bold and effective leadership. Who are today's college and university presidents? Where do they come from? What can be learned from the past? Are they tasked with realistic expectations? What will these leaders face in the future? How can they advance their institutions to greatness?

University President: A Snapshot

According to the latest presidential survey by the American Council on Education (ACE) (2012), the average campus leader is a white male in his early 60s; married with children; holds a Doctorate in Education; and has served in his position for 6 years. One-third held the position of Chief Academic Officer prior to their current

position. The majority spent their entire careers in higher education, and an even larger percentage served as full-time faculty members at some point in their careers. Only 26% of institutional leaders are women, and just 13% come from diverse backgrounds. Ironically, these leadership characteristics do not reflect current trends in the student body, as women now outnumber men on most college campuses, and the share of diverse students increased from 20% to 34% between 1990 and 2009.

Interestingly, when the study was first conducted in the mid-1980s, presidents were in their early 50s. The ACE survey suggested that the main reason for the increase in age may be the complexity of issues and matters now facing the office: “Governing boards and search committees are likely looking for more experienced leaders” (Cook, 2012, p. 1). This is no surprise, since the number of tasks and constituents to be served has significantly multiplied.

Specifically, the ACE survey showed that most presidents spend the bulk of their time on fundraising, budgets, community relations and strategic planning. Fortunately, it indicated that “(with the exception of budgeting), these are also areas presidents reported enjoying most” (Cook, 2012, p. 2). But the breadth and depth of the skill set makes it hard to believe any candidate could be adequately prepared to fill the presidency. In this somewhat famous quote, former University of California President Clark Kerr attempted to capture the prerequisites for the role:

The university president in the United States is expected to be a friend of the students, a colleague of the faculty, a good fellow with the alumni, a sound administrator with the trustees, a good speaker with the public, an astute bargainer with the foundations and the federal agencies, a politician with the state legislature, a friend of industry, labor, and agriculture, a persuasive diplomat with donors, a champion of education generally, a supporter of the professions (particularly law and medicine), a spokesman to the press, a scholar in his own right, a public servant at the state and national levels, a devotee of opera and football equally, a decent human being, a good husband and father, an active member of a church. Above all he must like traveling in airplanes, eating his meals in public, and attending public ceremonies. No one can be all of these things. Some succeed at being none (Kerr & Glade, 1986, p. 22).

Given this description, it is no wonder that governing boards and search committees look for experience. There is lot riding on the presidential candidate who will presumably take their institution to new heights of excellence.

An Historical Perspective on the College Presidency

The role of president has changed since the earliest days of the colonial colleges. Back then, the college president was most likely a member of the clergy (Rudolph, 1991). In fact, it may have been a by-product of their duties, as these men served as the teachers/disciplinarians to boys preparing to make a professional contribution to society (Schmidt, 1930). It wasn't until the mid-to-late 1800s that the presidential role evolved, as the Industrial Revolution ushered in a more scientific age. As a result, both the educational process and the college became more complex (Rudolph, 1991; Schmidt, 1930).

Higher education then enjoyed what is commonly considered a ‘golden age’ of unparalleled academic leadership (Kerr & Glade, 1986; Cowley, 1980; Freeland, 1992), and it is believed that the United States’ most respected colleges and universities today stand on the shoulders of the mythic giants that led during this timeframe (Freeland, 1992).

The golden age ran from the early 1940s to the early 1980s and was “the period of largest student growth in American higher education,” when the nation experienced a “phenomenal and uninterrupted increase in the number of students attending college” (Cummins, 2013, p. 211). Serving as president during this era were Kingman Brewster at Yale University; Clark Kerr at the University of California; Grayson Kirk at Columbia University; Theodore Hesburgh at the University of Notre Dame; William Bowen at Princeton University; and Derek Bok, who began his 20-year tenure at Harvard in 1970 (Cummins, 2013, p. 211). Adding to the mystique of these “great men” is a story of when Harvard’s James Bryant Conant called the White House in the early 1940s and asked the operator to tell Mr. Roosevelt that the President was on the line (Glassner & Schapiro, 2013).

Several commentators have noted that few college presidents today “enjoy the reputation of the giants a century ago” (Birnbaum, 1992, p. xii-xiii) or have “the backbone to take on the pressing issues facing our campuses and society” (Glassner & Schapiro, 2013). They say that most find themselves reduced to “obscure bureaucrats, little known on or off campus; their jobs reduced to groveling for gifts and answering angry emails” (Glassner & Schapiro, 2013). Fisher and Koch (1996) lamented that some of higher education’s most preeminent leaders have been replaced with less than impressive successors:

The college presidency, once the situs of powerful, effective, and inspirational leaders, has decayed and all too frequently now is a refuge for ambivalent, risk-averting individuals who seek to offend no one, and as a consequence arouse and motivate no one. The result is a visible lack of academic purpose, declining institutional effectiveness, and (most lamentable) inferior education (p. 421).

But is this assessment accurate? Or, as so often occurs, does the memory become more perfect with time? Is it really fair or wise to make comparisons, given the vast challenges university presidents face in today’s educational environment?

Several authors (Birnbaum, 1992; Green, 1997) have argued that institutions are falsely bewitched by the “Great Man Theory of Leadership.” As Green (1997) pondered,

Where, we ask, are the great leaders of yesteryear? Our lament goes unheeded because, I suggest, we are asking the wrong question. The world has changed and so have organizations. We need to ask different questions and seek different answers about leadership (p. 138).

While the environmental factors may be new, the problems and challenges of the presidency are fundamentally the same, especially when it comes to consensus on what the position actually entails. One researcher asked, “Are university presidents

academic leaders or risk managers or fund-raisers?” (Reut, 2013). Should their focus be on “modernization amid a revolution in online learning, information technology, and global education” or should they “hold fast to the longstanding practices of a traditional liberal arts education?” (Glassner & Schapiro, 2013). Most would probably say all of the above.

Today’s presidents may not be mere mortals after all. In fact, in some ways they may be more superhuman than the “great men” of the past.

Current Trends and Expectations

It is enormously challenging to guide higher education in the 21st century. The number and complexity of issues is dizzying, if not overwhelming. At the nexus of these challenges is the institutional leader. And unfortunately for him or her, it is nearly impossible to open *The Chronicle of Higher Education*, or one’s daily newspaper, without finding a college or university in crisis. This increased scrutiny and public attention makes the “college presidency much more contentious than in the past. There is no place to hide from the 24/7 news cycle” (Nelson, 2008, p. A37). As a result, presidents run

the continual risk of being whipsawed by an ever-expanding list of concerns and interests. Instead of a leader, the president has gradually become juggler-in-chief, expected to meet an endless stream of individual needs and special demands within and outside the institution (Association of Governing Boards, n.d.).

The accountabilities of the modern university presidency seem endless. With the number of balls a president must keep in the air, Bornstein (2004) believed “the role is becoming an increasingly untenable position, mutating beyond the ability of any one person’s capabilities” (p. 18). Moore (2001) viewed the job of a university president:

As one of attempting to put a triangle, square and circle in the same space at the same time - it is difficult, if not impossible. Presidents remain quite cognizant of the reality that they must accommodate all three dimensions of their complex role, credibility among their multiple stakeholders depends on it (p. 5-11).

Adding further pressures to the role, is the unrelenting pursuit of financial support. As one author noted, there are two constants in higher education: First, that there always has been and there always will be a need for strong leadership; and second, there will always be a near insatiable need for resources (Cook, 1994).

Ongoing drops in state and federal resources have left universities of all sizes struggling for new sources of revenue. Philanthropic support is the most obvious alternative, so today’s institutional leaders are expected to serve as chief fundraiser and friend-raiser. In addition to engaging donors, presidents are expected to bring focus to any fundraising effort (Setterwhite & Cedaja, 2005, p. 336); provide overall guidance to campaigns (Weingartner, 1996); identify within the university the most significant financing needs for which private funds should be sought (Essex & Ansbach, 1993); set realistic expectations as to what can be funded through institutional advancement, and

ensure that all these things support the overall mission of the university (Willmer, 1993).

Indeed, “as the essence of the institution, the president inspires donor confidence and creates the climate in which fund-raising takes place” (Fisher, 1984, p. 165). Therefore “the fund-raising process cannot be separated from the fundamental roles and responsibilities of the president” (Setterwhite & Cedja, 2005, p. 341).

As a result, the average president spends more than 60% of his or her time meeting with outside constituents, prospective donors and/or engaging in fundraising-related matters (American Council on Education, 2012). Kerr (1993) noted that attracting financial resources, allocating the resources, and formulating the vision for the university are among the most significant roles of the college president.

Best Approach to the Job

There is no lack of advice for a new president. The laundry list of why presidents fail and how they can succeed is never-ending. Some practical input from one former president recommended that new leaders avoid the urge to: make decisions without knowledge of the organization; blame others; over-promise; talk only to those who agree; give a soundbite to the media without careful thought; assume critics are few; and treat everything as a matter of principle (Peterson, 2008). How can anyone keep all of those things at the forefront of their mind?

Popular opinion advocates for individuals who can immediately transform their organization, but there is a growing trend toward leaders who possess a strong combination of systems and vision. A five-year longitudinal study of college and university presidents concluded that:

In today's world of greater participation, shared influence, conflicting constituencies and assorted other complexities, heeding the calls for charismatic presidents who can transform their institutions would be more likely to lead to campus disruption than to constructive change (Birnbaum, 1992, p. xii-xiii).

Other research is predisposed to a blend of transactional and transformational leadership; in essence, a leader who can balance the paradoxical demands of the college presidency: visionary and steward; active and reflective; consistent and creative (Guskin & Marcy, 2002). If we want our presidents to reflect a new model of dynamic, collaborative, engaged and visionary leadership, then we need to support them in navigating the paradoxes of modern presidential leadership and help them “develop a more complex understanding of the characteristics of leadership” (Guskin & Marcy, 2002, p. 12).

This is consistent with a more integral approach to leadership. As Bornstein (2008) wrote, college leaders are best to “view their responsibilities as a coherent whole” (p. A38). It can be easy for a president's job to get segmented — some focus more externally, and others more internally — but the “bifurcation makes the presidency less successful” — rather than changing hats, the president should be wearing “one big all-purpose hat” (Bornstein, 2008, p. A38).

Even more fundamental, Hoppe (2003) recommended that aspiring academic leaders demonstrate fortitude: the will to make the right decision for the right reasons.

Similarly, Nelson (2008) argued that a president is best to act “as architect of a middle ground, shaping a center that holds the driving force encouraging discourse and debate” (p. A37). These approaches do not rely on either a transformational or transactional leadership style, but rather “profound courage, intellectual insight, persuasive powers, and educationally well-grounded thinking” (Nelson, 2008, p. A38).

Whatever the skills, new presidents are expected to hit the ground running (Martin & Samels, 2004). “We believe presidents not only need to learn all of these (requisite) skills, but they also need to learn them rapidly. The traditional one-year honeymoon appears to have shrunk to a matter of months” (Martin & Samels, 2004, p. 12). Do it all and do it now.

Our Collective Responsibility

In describing today’s university — “the multiversity” — Kerr (1997) reflected on how it is an inconsistent institution. It is not one community but several — the community of the undergraduate ... the graduate ... the humanist ... the social scientist ... the scientist ... the professional schools ... the nonacademic personnel ... the administrators. Its edges are fuzzy — it reaches out to alumni, legislators, farmers, businessmen, who are all related to one or more of the internal communities. As an institution, it looks far into the past and far into the future, and is often at odds with the present (p. 14).

For a president to be successful in this complex environment, Hahn (1995) argued that institutions must get more serious about their collective role in the leadership process. He said, “there will be more successful presidents when we are able to think more seriously about what we need from them and about the conditions that enable their success” (Hahn, 1995, p. 13-20). Hahn (1995) continued:

For every President Old and New, there is a President Other who is an instant hit just by contrast with a predecessor. President Other wows them with a few quick, no-nonsense decisions, a breath of fresh air after years of a CEO whose door was always closed. There is a problem here, but it is not Presidents Old, New, and Other. The problem is us (p. 15).

In his research, Green (1997) recommended that institutions “untie presidents’ hands so they can lead” (p. 7). Green (1997) continued, saying that:

It’s not surprising that many campuses succumb to the temptation to seek a president who can fix things and absolve others of the responsibility of undertaking the perilous and often unpleasant journey of change. We need all members of the campus community to invest themselves willingly in designing a common future (p. 11).

As Birnbaum (1992) stated:

Leadership is defined not only by what leaders do but also and even more

importantly by the ways in which potential followers think about leadership, interpret a leader's behavior, and come over time to develop shared explanations for the causes and outcomes of events (p. 3).

Effective leadership is cultural (Kempner, 2003). By understanding that the purpose of leadership is not self-aggrandizement but to reveal the spirit of the institution and its participants, colleges and universities can better define the type of leader they need. Kempner (2003) believed that:

Educational organizations cannot effectively hire a leader until they define what leadership means to their institution ... If leaders wish to transform an organization, they cannot hope to be successful by operating only in a classical, top-down manner, fomenting democracy may be a more appropriate vehicle to effect change than fiat issued from on high (p. 383).

As citizens of our institutions, we can make the future of presidential leadership more hopeful by assuming greater collective responsibility for success. This will require more realistic goal-setting for leaders, and working toward conditions that allow leaders to succeed (Bornstein, 2004). The demands of leadership will always be formidable. To be realistic about these demands does not minimize or lower our expectations; it simply focuses those expectancies in a more thoughtful way.

A Higher Calling

Perhaps the vision for presidential leadership should be refocused on a higher purpose, one that embraces the unique influence that presidents can have on the future development of our communities. The college presidency is one of the most influential and important of all professions. As Rhodes (1998) described it:

The future leaders of the world sit in our classrooms. The academic presidency is important because the university is the creator, conservator, and mediator of knowledge. The first and greatest task of a president is to articulate the vision, champion the goals, and enunciate the objectives. The president should employ his or her best skills to dream the institution into something new, to challenge it to greatness, to elevate its hopes and extend its reach, and to energize it to new levels of success and galvanize it to higher levels of achievement in every area of its institutional life (p. 14-18).

Presidents become the gatekeepers to educational freedom; they open the doorway to one's future. College and university presidents help those in and around an organization make sense out of the circumstances that confront them, particularly during changing and uncertain times.

Knowing that meaning is taken from all forms of communication, college presidents need to carefully consider what messages they are sending when they talk, when they walk, when they write, and when they symbolize change. In doing

so, they are wielding a symbolic sense of power” (Rhodes, 1998, p. 14-18).

Though a bit dated, Fisher and Tack’s (1985) description of an effective college president is still relevant today:

(Someone) completely committed to what they do; genuinely respects others; and believes in themselves and others. They are action oriented; they accept authority and responsibility in governance; they have a penchant for work, work, and more work (come prepared); and they see the lighter side of things (levity, sense of humor). They are warm, outgoing people; they maintain self-control (never get upset or euphoric in public); use power with finesse; and they are visible, but they share the credit (p. 84-89).

Conclusion

After reading this paper, some might wonder why anyone pursues the role of college or university president. To say the least, it is a tough job. A series of daunting tasks, seemingly impossible to manage. Who would aspire to this?

However, when asked how they felt about their service, most former presidents described it as incredibly rewarding and that the benefits far outweighed the negatives (Pierce, 2015). Others said,

A university president’s day is never the same twice, so no tired bureaucrats need apply. The problems are frequently unique and call for an agile mind and a responsive personality to be effective, a president must want to solve problems, like people and love the university (Trachtenberg, 2008, p. A38).

Pretty simple. Pretty clear.

The college presidency is the job of a lifetime, for reasons well beyond the perks and the privileges. We get to create and sustain campuses where the learning and maturation of young people is paramount, where great teaching and path-breaking research can occur. What drives us is the chance to do something meaningful, for our society and the world (Glassner & Shapiro, 2013).

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Good to Great: The Partnership That Transformed a University and Gave Hope to Thousands

David Janes
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On March 22, 2015, a surprising story hit the pages of *The New York Times* like a bombshell—and the impact is reverberating through the halls of academia even today. Citing "insurmountable financial challenges," the Board of Trustees of Sweet Briar College, a 114-year-old women's college in central Virginia, announced that the school would close at the end of the term. Without warning — and many would claim, without reason — the board crushed the dreams of over 700 young women who had made commitments to spend four critically important years at Sweet Briar College. Closing the school so suddenly also had a devastating impact on the lives of more than 300 Sweet Briar faculty and staff members, some of whom had been part of that college community for decades.

The news was shocking for a number of other reasons. To an outsider, Sweet Briar College, nestled on 3,250 verdant acres in the foothills of the Blue Ridge Mountains, seemed like the idyllic personification of higher education. A renovated and expanded library, costing \$8.8 million and financed entirely by gifts from supporters, had recently been dedicated. At the time of the announcement, Sweet Briar had an endowment of nearly \$90 million. The endowment, while small, was respectable for an institution with fewer than 750 students. In its 2016 rankings, *Bestcolleges.com* listed Sweet Briar as the 14th best women's college in the nation and, as late as 2010, *Forbes* ranked Sweet Briar the 87th best college in the United States.

Finally, Sweet Briar, one of only two women's colleges in the United States to offer an ABET-accredited (Accreditation Board for Engineering and Technology) engineering program, had a passionate alumnae base with considerable financial resources. After an enormous uproar from every part of the United States, Sweet Briar supporters stepped in financially to stave off the closure, but the college's future is far from clear.

Sweet Briar College is not alone in its unfortunate predicament. Burlington College in Burlington, Vermont, and Dowling College in Long Island, New York, announced that they would close this year (2016), while other schools, including highly regarded Mills College in Oakland, California, with an enrollment of 1,548 students and an endowment of \$189 million (2014), are in peril. A 2015 report by Moody's Investor Service stated that the pace of college closures is quickening, an unsettling sign for many others in higher education.

Before you draw the conclusion that only women's colleges or small institutions face an uncertain future, consider the findings of a 2015 Gallup Organization survey. Conducted for *Inside Higher Ed*, the survey found that fewer than 40% of college presidents were confident about the sustainability of their institution's financial model over the next decade.

With all of its advantages, what went wrong at Sweet Briar College? Who is to blame? And how could the school's troubles have come so quickly? Could the collapse have been avoided?

Will Wootton (2016), former President of Sterling College in Vermont, offered important and perhaps self-evident insight: the responsibility for the institution's health, vitality, and success ultimately lies with the Board of Trustees.

That is where the mistakes are made, years before the actual shutting of the doors, because small colleges don't die in a moment. They linger, struggle. Presidents are let go. Others are hired. New trustees are hard to come by. Boards, weakened by years of tension and diminishing resources, find their members beginning to perform administrative tasks to help out. By the end, leadership is reduced to the intricacies of closure. And all this happens at a time when a board's expertise, history, and experience is most critically called for, if it exists. So the problem, compounded at smaller institutions where the margins for error are tiny, is not so much lack of money, which often seems to happen all of a sudden, but a long-term lack of professionalism, independence, and leadership at the board level.

I am not in a position to say what went wrong at Burlington College or Dowling College, or if Sweet Briar College or Mills College can be spared closure. But I can tell you what was happening at Chapman in 1991, just prior to Jim Doti's selection as the university's President. Jim had served as Chapman's Interim President on two previous occasions and through no fault of his, Chapman looked much like Will Wootton's description above. The two years before Jim's appointment were tumultuous to say the least. Chapman's faculty was unhappy; its students were unhappy; its alumni were unhappy; the surrounding community was unhappy; and Chapman trustees were most definitely unhappy. To make matters worse, enrollment and the quality of incoming students was falling at an alarming rate. Chapman was in the direct path of the perfect storm of failure and it desperately needed help.

As President Emeritus of Warren Wilson College and a Berea College board member, Douglas Orr (2014) knows firsthand about university leadership and the challenges it can face, so his perspective is especially valuable: "It is arguably the most important partnership in higher education because, in tandem, the board chair and the

president lead the board in defining its responsibilities and in setting the institution's strategic direction.”

Carol Christ, President Emerita of Smith College and board member of Dominican College of California and Sarah Lawrence College, is even more direct when she says that it is nearly impossible for any college president to do well without a good relationship with the board chair.

As chair of the Chapman trustees when Jim became President, George Argyros had the responsibility of working directly and immediately with Jim. George, who graduated from Chapman in 1957, was already a titan of the business world and would later serve as United States Ambassador to the Kingdom of Spain. Fortunately, George has never forgotten his beloved alma mater, becoming its longest-serving board chair, its largest donor, its most fervent volunteer and its most successful, high-profile alumnus.

Longtime friends, George and Jim quickly developed a common understanding and agreement about their respective roles. It was George's job and the board's to oversee the university from the 30,000-foot level. It was Jim's job to handle issues at the 3,000-foot level, where most things happen on a university campus.

From the beginning, their relationship was built on five basic principles:

1. A singular shared goal: to grow a private university in Orange County for future generations that was different from public institutions.
2. Differences of opinion were OK and even expected, but honesty, mutual respect, and trust were absolutes.
3. Open, regular communication — lots of listening and discussion, but no secrets and no surprises.
4. Hire the most talented and hardest working people, provide the resources they need to be successful, and then let them do their jobs.
5. Set the bar high, knowing that if we occasionally fail, we'll learn from our mistakes and keep trying.

Success obviously involves far more than crafting a simple set of principles. Jim and George would be the first to admit that they had a great deal of help (and some luck as well) while working closely together through the years. George was able to recruit some of Orange County's most successful and respected business and community leaders as trustees. They quickly became Chapman's most passionate and generous supporters. Jim was able to recruit some of the world's leading scholars, educators and researchers. And he was able to attract and retain some extremely talented and dedicated managers, some of whom continue to serve the university and provide long-term continuity and stability even today. The accomplishments of this exceptional and ever-growing group of people are now well chronicled. Chapman University's reputation, as well as the reputations of its Dodge College of Film and Media Arts, Fowler School of Law, and Argyros School of Business and Economics, continue to soar.

It is nearly impossible to succinctly list Jim's achievements, accolades, and awards outside the Chapman universe; they are myriad, monumental, and well-deserved.

But an article in the 2016 summer issue of *Chapman Magazine* did an admirable job of cataloging Chapman University's unparalleled accomplishments during Jim's presidency:

When Doti took office as Chapman's 12th President 25 years ago, the university was still a college, and enrollment was 2,200. Now the student body numbers about 8,000, many of them in the six colleges that have been added during his tenure. The number of buildings on campus has gone from 13 to nearly 70. Net assets have climbed from \$226 million in 2003 to \$1 billion today. There was one endowed chair in 1991; now there are 39, as well as 25 endowed professorships. Then there are these remarkable figures: since 1991, freshman applications have risen 1,867%, the average incoming SAT score has climbed more than 200 points, and Chapman's *U.S. News & World Report* student selectivity ranking has jumped from No. 92 to a position that toggles between No. 1 and No. 2, depending on the report (Arp, 2016).

The Center for Policy Analysis at the American Council on Education reported that the average length of service for a university president in 2011 was 7 years, down from 8.5 years in 2006. With his 25-year legacy as Chapman's president, Jim Doti has battered the industry average, as with nearly every other aspect of his amazing life — and he has an extraordinary CV to prove it.

In his 1991 Convocation Address, Jim issued this challenge: “Let us rededicate ourselves to the culture and values that made Chapman College great — a rededication that will surely make Chapman University even greater.”

As he steps down as president and to honor his extraordinary service, I invite each of us to accept yet another challenge: to dedicate ourselves to building on Jim Doti's remarkable achievements as we go forward — for that will surely make Chapman University even greater.

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The Road More Traveled by The Dotis (Apologies to H. Scott Peck)

Mark Chapin Johnson
Chapman University

Recently when humbled by an invitation to contribute to a Festschrift volume honoring Jim and Lynne Doti, I inquired of Daniele Struppa, Chancellor of Chapman University, what range of submissions might be appropriate. Primarily opinion or scholarly was the consensus. Since any scholarly contribution I might make would be so far removed from the Doti's academic fields of expertise (not much joy in another essay on Syria or ISIS at the moment), I concluded that an opinion on the unique and unparalleled impact of their decades-long presence at Chapman University and the lives they've touched through their passionate contributions there might be meaningful.

"Interwinkled" (coined by Ted Nelson) is a wonderful concept that revolves around the idea that there are no subjects, only knowledge cross-connected together. In reflecting upon the many intersections between Jim Doti and the world around him, his endless energy and profoundly unique and deep life skill set, I realized that Jim possesses that unparalleled ability to remember and connect everything in his world, and always to the betterment of the people and institutions around him.

Jim is a University of Chicago Ph.D. holder, student of Milton Friedman, has received accolades as a professor and is a possessor of all the traditional academic honors that are bestowed on bright and productive scholars. But that's not what this essay is examining. What do a man and his wife do with the decades they are allocated by the cosmos? The Dotis somewhere early in their ambitions decided to invest their talents in something beyond themselves, and they appear to have done so in an "interwinkled" manner, connecting their knowledge and abilities across all opportunities and situations in their paths. In the midst of their formative university years, such strategic thoughts may not have been conscious, but in hindsight, the outcomes have been spectacular.

What abilities are required in a leader to transform an old and venerable, but unimposing, small, unknown college from obscurity to national prominence in a

single career and still be energetically productive? As I considered the career of Jim at Chapman, it struck me that he possesses an almost unknown attribute that so very few ever do — virtually everyone that comes into contact with Jim genuinely likes him. He has that unique ability to make everyone around him feel as if they have his undivided attention and that he “hears them”. The follow ups of personally written notes or almost instant email responses are wonderful reinforcements of his attention. It is said that if one has even one true friend in life, then their life has been successful—what then does it say about a man that has many?

Over time it became clear to me that Jim had a dream, and not a small one! Transform Chapman College into a renowned university!

Throughout the past 25 years the widely seen public persona of Jim Doti is that of unending energy and movement—running marathons or climbing the highest peaks in the world, attending constant public events representing Chapman or presenting yearly economic forecasts to business, community leaders, and faculty. An Energizer Bunny of sorts, Jim is always in motion and seemingly everywhere all the time projecting an inviting image of a growing and exciting university. Woven into Jim’s unique style of promoting Chapman is a sense of humor that can show itself in the most unusual ways. I remember one year when, for an economic forecast, Jim wanted to find a memorable way to convey how the Federal Reserve was dumping reserves into the banking system, so he thought it would be fun to video tape us lifting a large trash can beneath a helicopter then dumping it as it took off, representing the Reserve’s actions. It was most memorable and left the audience laughing. This seemed to be a natural evolution for Jim from the previous year where he had simply used a golf cart to take his home trash cans out to the curb symbolically showing the same concept. Then there are the lunches, dinners, receptions, parties, and endless administrative and faculty meetings he has attended to represent the university.

Over time I came to a more nuanced understanding of what was really transpiring through my observations of Jim’s management style. It is a very rare and effective style, yet very subtle. For all of the passionate, visible, and active motion going on in his visible efforts to guide Chapman through the years, a remarkably focused and entrepreneurial strategy was being pursued thoughtfully—to transform Chapman University.

So then, what have the Doti’s done and how did they do it? Therein my interaction with Jim over the years may be illuminating. In a career far away and long ago, I was an entrepreneur busily building businesses and chasing the “American Dream”. As those efforts bore fruit, I became involved in community organizations so that I might give back some of what I had been blessed with. My first contact with Jim, like many people, was when he appeared at a community event I was also attending. He graciously introduced himself and invited me to visit Chapman sometime. It seemed like a wonderfully personal and warm invitation — which it was — but only later did I realize that Jim does this with everyone!

Over the years, I saw Jim at a wide variety of Orange County gatherings — it seems as though he is everywhere all the time — and he continued to invite me to Chapman events which I enjoyed occasionally. Twenty years ago, when visiting the then small campus, I was struck by the sense of energy and focus in everyone I met—an

awareness of a very unique style of leadership was becoming obvious to me. What also became clear much later were the parallel processes I was observing along the journey with Jim. I was building my businesses while he was transforming Chapman, and he demonstrated the best economic planning which ultimately led to his success.

In this decade, there are approximately 2500 four-year colleges in America educating somewhere around 11,000,000 students at any given time. Out of such a universe, how does one institution like Chapman transform in a few short years and have such tremendous growth and success while certainly hundreds of national universities are all striving for the same outcome?

Chapman is a university, but at its core, it is a business. A business possessing all of the same basic attributes of any business: a mission, facilities, employees, and products which it sells into the marketplace. No matter how noble or inspiring its mission and vision may be, it is subject to all the same market and managerial issues any business in any industry is faced with. As with any enterprise, if well done, success will follow. If not, bankruptcies and failure result, or even worse, long term mediocrity and stagnation; not a dead business, but a non-descript one just barely staying alive.

As an entrepreneur, I learned that we're all different — not good or bad different — just different. Our skill set is to dream, create, plan and strategize how to build new businesses and make profits. Many of us screw it up by trying to manage our creation by also operating the business (definitely not one of our better skill sets), so then we search for talented operations executives to help us manage our business. Then we frequently discover that hiring and identifying talented executives is not one of our stronger skill sets either. So then what we end up seeing are many initially successful businesses slowly failing as their creators reach the limits of their management abilities (the essence of the Peter Principle). Then there are the excellent operating executives that can and do manage mature and successful businesses well. They are invaluable and are the life blood that keeps an organization humming if it's successful. Both of these types and styles have to effectively mesh with a Board of Directors or Trustees — just another tactical challenge in the strategic quest for long-term success.

Because Jim drew me, an entrepreneur, into his world at Chapman, I initially viewed him and the university through the lens of my life experiences and skill set (which early on was myopic). A significant obstacle that the Dotis faced, which may not be frequently recognized, was that they didn't just have to work entrepreneurially towards improving and financially guiding Chapman, they were actually transforming an existing business into a whole new creature. It was a little like performing maintenance on a Boeing 747 engine while in flight — no easy task.

What I didn't and couldn't see from my limited perspective many years ago was the varied set of talents Jim possessed and how he used them differently, depending upon the circumstances at the time. Over time, as my horizons and insight changed, so did my understanding of the very different way that Jim interacted with different constituencies, and also how he wove those constituencies together for the benefit of his long term strategy to transform Chapman University. The university, under Jim's leadership, developed, over the years, a succinct and clear vision and mission statement:

Chapman University will be a preeminent university engaged in distinguished

liberal arts and professional programs that are interconnected, reach beyond the boundaries of the classroom and work toward developing the whole person: the intellectual, physical, social and spiritual dimensions of life. The mission of Chapman University is to provide personalized education of distinction that leads to inquiring, ethical and productive lives as global citizens.

A daunting statement for sure, but then how is it realized and successful? And that is where observations of Jim and Lynne become pertinent.

Many in our community originally met Jim and developed our relationship with Chapman because of Jim as the promoter and fundraiser with unlimited enthusiasm for Chapman and its future. And therein one of his remarkable skill sets became obvious — salesmanship! Many in Orange County years ago had no idea what Chapman University was, could be, nor might have even been interested, but Jim's infectious personality, graciousness and ever-present passion for Chapman drew many to the university to see and favor the opportunity Jim presented.

For Jim and Lynne this “salesmanship” talent was, as I learned, but one of several abilities that would become obvious over time though the possession of salesmanship/marketing or whatever one may call the process, is an indispensable attribute of all successful entrepreneurs like the Dotis.

It is one thing to be successful in raising very substantial funds for a university, but then what? Enter the next skill set: strengthening and expanding a vibrant, passionate, connected, capable Board of Trustees to support the university vision and mission. Many, if not most, trustees of universities have little or no real involvement or even ties to the university boards they serve on and therefore, there is little passion or personal understanding of the institutions they serve. As an example, there is a local, very renowned graduate university that has a Board of Trustees of about 25 individuals scattered around the country. The board is made up of very successful titans of industry, CEOs of multinational firms, or politically and socially connected people of great wealth, yet about 23 of the 25 have no connection to the institution personally at all. They themselves didn't attend, nor has anyone else in their family, but they sure look great on the letterhead. The outcome? The university is always in very difficult financial circumstances and does not have a coherent long-term strategy for success, nor a vision or mission statement of any significance.

Jim recognized early on in his tenure that successfully raising funds for Chapman was only a part of what needed to be done in order to achieve strategic success — he needed a board that was unique, involved, and equipped with individual skills that could actually be used by the university (not typical of many university boards). How to do this? From the beginning of his 25-year plan, Jim connected the dots and encouraged his donors to follow their investment in the university by serving on the Chapman board while simultaneously doing something else — as Jim brought donors with real skills onto the board, he very skillfully “sold” trustees on the importance of their children, their siblings, their friends, and family attending Chapman. Given Jim's concurrent emphasis on improving the educational outcomes of Chapman students, this approach with trustees was very successful and deepened the connection of board members to the university. The result of this strategy over time is that there are now

just over 50 trustees with real-world, valuable skills serving Chapman, each deeply connected to the university and with many family members who are students or alumni. One of the excellent outcomes of such board building has been the single focus of trustees on the work of Chapman — it is not a “networking” board people serve on to develop business relationships — as many boards are. A wide and diverse group of people are drawn together by a common passion and vision, that of the continual betterment of the education and life skills of students. So what can be added to “salesmanship” skills is the strategic strengthening of the board to support the vision and mission of Chapman at a very real and connected level for the future. The skills to manage the growth and effectiveness of a board of university trustees is far different from those of “salesmanship”, and so, add this unique skill set to Jim’s dossier.

What Jim and Lynne have done over time is to weave together (interwingle, if you will) a remarkable set of varied entrepreneurial abilities that have resulted in the dramatic transformation of Chapman University into one of the most remarkable success stories in university education in the United States.

This article could end here and it would be an accurate and fitting reflection on the astonishing outcomes of the Dotis’ decades-long investment of their time, talents, and passions in Chapman — but it would be incomplete. The transformation described above illuminates the extraordinary economic expertise and entrepreneurial talents of the Dotis that would make Milton Friedman proud back at the University of Chicago. Yet, there is another important dimension of their contributions which needs to be illuminated that transcends even their remarkable economic outcomes.

As significant as transforming Chapman has been over the many years, the ability to transform lives along their journey has been epic (yes, big word used intentionally). Over the years, those fundamental economic abilities that have allowed the Dotis to succeed at their vision for Chapman have also benefitted countless students, professors, administrators, trustees, friends, and others to grow in their lives dramatically beyond what they may have ever anticipated before they met this unique couple. Those that have been fortunate to be in the acquaintance of the Dotis over the years have come to recognize that those “reach for the stars” expectations of theirs for transforming Chapman also extended to those around them. The unexpected, although in hindsight, predictable, result is that along their journey of transforming Chapman far beyond traditional expectations have been many, many lives — such as mine — that have reached levels most of us never would had imagined had we not had the good fortune to tag along with Jim and Lynne for much of our life journey.

Tribute to Jim Doti: A Personal Account

Chuck Martin
Trustee

As I remember it, I first met Jim at a retreat organized to promote the formation of the Institute for Free Enterprise at Chapman. At that time, Jim was the Chairman of the Department of Economics. I was impressed from the start. Jim had earned his Ph.D. from the University of Chicago, the top economics program in the world. The faculty there included Nobel Laureates Milton Friedman and Frederick Hayek, the thought leaders for free market driven economic theory. The big ideas pioneered by these men changed public policy in nations across the planet.

I had authored a white paper proposing the establishment of the Institute and trustees, including the university leadership, were enthusiastic about moving forward. As a free market economist, Jim was instrumental in its formation. What was to become a long and wonderful relationship with him was born out of that initiative. Odd as it might seem, James Roosevelt Jr., son of Franklin Delano Roosevelt, was appointed as the Institute's first Director. At that time "Buck" Smith was President.

I became a Chapman Trustee in 1988. Chapman had gone through a very difficult period. Its innovative World Campus Afloat program, during which the institution actually owned a ship, was bankrupting the university. This was due in large part to skyrocketing oil prices in the early 1970s. George Argyros, Chairman of the Board of Trustees, was looking to strengthen the university's governance by adding members with strong business and financial experience.

In 1988, with the retirement of Buck Smith, Jim Doti was appointed as the acting university president; while a national search was commenced for a new president. The Board sought a new leader that would aggressively advance the institution. Jim was a candidate, but in 1989, the Board ultimately selected Allen Koenig, who was serving as the president of a private university in the Eastern United States. At that time, Chapman had painfully managed its way through the financial crisis caused, in part, by its ownership of the ship. However, the university was not doing well. Chapman's student applications were weak, the measures of student quality were low (very low), its faculty was poorly paid out of financial necessity, the campus was not attractive, and its ranking was poor among its peers. The Board of Trustees sought change. They

were prepared for a leader that would “make waves”. What they did not expect was that the Koenig waves would be tsunamis. With Koenig at the helm, problems emerged everywhere in the university and the Trustees grew concerned.

In the meantime, Jim’s reputation had grown and he was being recruited to head up other universities. I recall a Chapman event at the Pacific Club when I was talking to Jim. He confided in me that he had a very attractive offer to become the President of another university. I took him aside, and confidentially encouraged him to delay his acceptance. I told him to “just wait a little and see what happens.” What he did not know, and I could not tell him, was that we were about to fire Koenig and appoint him as Chapman’s permanent president. Jim Doti became Chapman’s leader in 1991.

As he took the institution’s top post, he was inheriting an organization that was not doing well. In the 25 years that followed, he would lead the institution through an impressive period of growth and transformation. It was through Jim’s leadership that Chapman would emerge to become the outstanding institution of higher learning that it is today. But it was not an easy task to accomplish and would take all of his skill and relentless effort over decades to remake the university from top to bottom.

Upon his ascendancy to the Chief Executive role, he asked me to meet with him every month for some coaching on how to be a good leader and how to run the institution. He knew that, while he had great academic credentials, he had very little management experience. I had served on many corporate boards, hired and fired many CEOs, and consequently had mentored many leaders in the corporate arena. He saw this as an opportunity to bring up his managerial skill level at an accelerated pace. Because of the financial complexities of the university, we would sometimes meet at the office of Don Sodaro who had excellent accounting and financial reporting expertise. In the course of this, Don, led and I helped restructure the way the university prepared their financial statements to make it easier to run Chapman’s complex educational organization. This process went on for almost a year and Jim quickly stepped up to the managerial challenge of operating the university.

Evolution from a College to University Status

The transformation of Chapman was a multi-dimensional process. Through most of its history, Chapman was a small liberal arts college. Its academic offerings were very narrow and it had no professional schools. At that point, it was correctly called Chapman “College” reflecting its small size and lack of broad academic programming. Many years later, through Jim’s leadership, it would emerge as a full spectrum, comprehensive “university”.

The first expansion from its liberal arts heritage was the addition of the business school, which later became the Argyros School of Business and Economics. The school was kick-started with a naming gift from the university’s Chairman, and alumnus, Ambassador George L. Argyros. One of Doti’s strengths is his ability to recognize and recruit leadership talent. He saw something special in Bob Bassett who was running a department offering film studies classes. These classes were in great demand and Bassett wanted to elevate the program to School status within the university. Jim got behind the entrepreneurial film leader and created the Chapman School of Film and Television in 1996. Even before this, Marion Knott was an early supporter of Bassett’s

effort. In the 2001-2002 timeframe, my wife Twyla became enthusiastic about the potential of the film school and began looking for donors to name the school and build out its world-class facilities. Twyla introduced Larry and Kristina Dodge to Chapman and the Film School initiative and got them excited by articulating a vision of what it could become. They became interested; ultimately making the naming gift to the school. Marion also put up a major gift to build the studio facility that bears her name. It is unquestionably one of the best in the United States. Today, the Chapman Film School has risen to become ranked as one of the top five in the nation.

Jim's accomplishments in building out the academic infrastructure at Chapman were extraordinary. Key to this was Jim's fabulous fundraising skills. He did not just ask donors for money, he shared with them a vision and excited them about what their gift could do to make a difference. In 1995, Doti started the Chapman Law School, soon getting a gift from Don Kennedy to name the building and another gift from Dale Fowler to name the school. The Schmid College of Science and Technology was formed in 2008. In 2013, Chapman launched Orange County's first School of Pharmacy. In 2014, Chapman created the Crean School of Health and Behavioral Sciences and in 2015, opened the Rinker Health Sciences campus in Irvine. Chapman's School for Performing Arts just recently opened its Musco Performing Arts Center in 2016. There was a long stream of these important developments that have helped expand the depth and breadth of the university. As the Doti-led transformation progressed, in 1991 the institution made the official decision to rename itself Chapman *University*.

Athletics

With the renaming came the decision to drop from NCAA Division II status to Division III status for Chapman's athletics program in order to focus the university more on academics and teaching. He faced considerable resistance from the athletics department and its boosters, but ultimately prevailed. The move allowed the university to redirect scholarship funds from athletic awards to academic merit awards, thus raising the student quality of the university.

Corporate Restructuring

Chapman had operated an adult education program called University College since 1958. This program initially provided an educational option for military personnel, but gradually served an increasing number of working adults. Its student population was about 12,000 for various fields of study that were provided at 25 campus locations. For years, it was an accreditation and strategic conflict for the university, since its needs, faculty composition, and markets were very different from those of the main campus. In another of his "big ideas", Jim Doti determined that it would be an advantageous strategic move to separate the two organizations. It was a great idea, but much more difficult to accomplish than anyone thought. I was appointed by Chapman's Board of Trustees to head up a Special Committee to explore the feasibility of accomplishing that and to structure a corporate non-profit reorganization of the university. This type of transaction had rarely been done in the United States, and although it seemed simple on the surface, it proved to be a challenging process.

We were fortunate to have an excellent leader for this unit in Gary Brahm. Gary

had a long successful career with Chapman as its EVP and CFO for 14 years and wanted to run the new adult education unit, now called Brandman University, in recognition of a lead gift by the Brandman Foundation. The difficulties with accomplishing the spin off were many. Because of its operational character, taking revenues from consumers, there was no certainty that we could obtain the necessary 501(c)(3) tax exemption. Executive compensation was also a challenge in that the Internal Revenue Service closely examines these situations for excessive compensation, which is disallowed under the statute. We sought to compensate the executive team generously and provide a quasi-equity benefit for them. I solved the latter by designing a retirement plan payout that was driven by the school's performance metrics in its future years. This all came under serious scrutiny by the IRS, but with thoughtful positioning, the aid of our compensation consultant Mercer and law firm, we were able to get it approved. In 2007, we completed the reorganization wherein the main campus and the adult education division became separate subsidiaries of Chapman University, the parent holding company.

Building a Leadership Team

In my corporate life, I have learned that there is no more important a task for a Chief Executive than building and retaining an excellent management team. In that endeavor, Jim Doti has been totally superior. In this area of his responsibility, we only need to look at the people he has recruited into leadership positions: Gary Brahm who served 17 years as the university's Executive VP for Business Operations and CFO before moving on to head up Brandman, Sheryl Bourgeois who has skillfully led University Advancement for almost two decades, Harold Hewitt who took over Gary's role as Executive VP and has done an outstanding job, Daniele Struppa the brilliant Chancellor recruited 10 years ago, who runs the main campus so well that he became Jim's successor to the presidency. Those leaders have in turn, hired excellent people into the next layer of management. When one looks at the quality of leadership at the Dean level for the Schools and Colleges of the university, it is easy to come away very impressed. The same goes for key posts in the university's administrative staff.

Recruiting talent is one thing, but retaining them is another issue. When organizations like Chapman become highly visible successes, they attract competitors that go after their leadership team members. It is amazing that Jim and Chapman have been able to create a culture and environment that has retained this exceptional team over such a protracted period. Overall, President Doti has built an outstanding team and the institution's performance reflects their contribution to the university's impressive progress. Chapman's brilliant success is a product of this team's efforts, but it was Jim that assembled that team.

Engagement of the Orange County Community Governance

Jim's personal, engaging manner and vision for the university has captured the affection of leaders throughout the region. Across the Orange County landscape, people have embraced him as the president of the university. In great part, because of Jim, those individuals have gotten behind the university with a high degree of enthusiasm and confidence in its management. This has allowed Chapman to recruit an exceptionally

high quality Board of Trustees. Good governance is an essential ingredient to the success of any organization. At Chapman, the Board and its Committees work hard to advance the institution and assure that its financial and operational matters are carried out in a highly professional manner. While Jim has created a vast number of friendships among these trustees, it is by no means a “rubber stamp” board. A number of big proposals brought before the board were not approved. Among these was the acquisition of a PBS TV station serving the LA/OC market. Another was taking over a university that operated a medical school. The Board of Trustees saw the TV station as a potential diversion from the university’s academic mission and was concerned that the non-traditional medical program would tarnish Chapman’s image. I was an activist in these disapprovals and a thorn in Jim’s side on these decisions. But all turned out well and the university moved forward on its path to excellence.

Campus

Few people, including prospective students and parents, that visit Chapman come away with anything except a very positive impression of the campus. The university’s physical plant is beautiful and extremely functional. Its architecture is varied and very “college like”. The landscaping is attractive, including interesting sculpture, busts of inspirational figures, and attractive meeting places. With the sports facilities, student union, residence halls and interfaith chapel, the university offers a wonderful living-learning environment. It is all very well thought out and designed. Jim’s “fingerprints” are all over it with the ideas he promoted and the sponsorships he raised. The Chapman campus has been crafted into a masterpiece that has been assembled in the 25-year tour of duty by Jim Doti.

Rankings/Quality of the Institution

All of these factors have caused Chapman to rise steadily in the national and regional rankings. The university has gone from the “back of the pack” to becoming one of the most admired institutions of higher learning in the western United States. Along with this came a strong surge in student applications, allowing the university to improve its selectivity measures and, through that, the quality of its student body. As the university has grown, the additions to its faculty have been impressive. Across the board, Chapman’s faculty is compensated in the top quartile of its peer group and it has been highly successful at recruiting top faculty in all disciplines.

When we look back on the remarkable trajectory of Chapman over the last 25 years of Jim Doti’s reign, it’s hard to come away with any view except to be, not just impressed, but to be amazed. It is, as I have often said, “the biggest success story in higher education.”

I once asked Jim “Why did you come to Chapman? You graduated with a Ph.D. from the top economics school on the planet at the University of Chicago. Your opportunities must have been endless. Why take a job at a small, struggling liberal arts college in Orange, California?”

Jim laughed saying that Milton Friedman had asked him the same question back in 1974. He had also been offered a job at General Motors. It paid four times the Chapman

starting salary of \$9,500/year. But he wanted to teach and decided to take the job at Chapman for one year, then move on to a larger research university.

As he recounted the story, it was about two months after arriving in California that he was driving down Pacific Coast Highway toward Laguna Beach for the first time. It was a glorious Orange County day in November. When he spotted the main beach at Laguna he saw what looked to him like heaven. That was an epiphany that led him to decide to stay in Orange County. He remarked that he also had come to love the culture and feel of Chapman. Looking back on it now, he said that Chapman was a small enough place where he felt he could make a difference.

And he certainly did!

A few years later he met Lynne, fell in love, and that sealed the deal.

Economics, Productivity, and Presidential Leadership in Higher Education

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Under the 25 years of James Doti's presidency (1991-2016), Chapman University experienced a tremendous rise in university rankings. In 1991, Chapman ranked 61st on the US News & World Report Best Western Regional University rankings; in 2015, it tied for 7th. The fact that both he and his wife, Lynne Pierson Doti, hold a Ph.D. in Economics may be more than coincidental with this rise. Organizations that ignore economic principles generally do so at their own peril. President Doti spoke at Freedom Fest 2015 in Las Vegas about some of the ways that Chapman University has applied economic ideas, such as comparative advantage, economies of scale, and harnessing incentives under his leadership (Doti, 2015). His message was clear —universities will deliver higher quality output at a lower price when they employ economic theory as compared to when they ignore it.

While there are many directions in which one can go with respect to writing about the application of economic ideas to higher education, the primary focus of this paper will be on college productivity. There is arguably no more important an economic measure than the amount of output produced per unit of input. Since the Industrial Revolution, most industries have seen tremendous advances in productivity and as a result, global standards of living have risen 34-fold over the past 215 years, after basically doubling over the previous million years (DeLong, 2014). In short, advances in the quantity and quality of capital (both human and physical) mean that the world's scarce inputs are able to make far more output than they could have two centuries ago. With respect to higher education, it is true that today some professors use PowerPoint and smartboards — tools that Socrates did not have at his disposal when he was teaching the youth of Athens. However, when one thinks about the total cost of inputs divided by the value of outputs, it is clear that productivity advances in

higher education have lagged well behind almost every other industry over the past two hundred years.

University Presidents and the Field of Economics

The pressures of being a modern day university president are extraordinary, which is why the average tenure of a university president is only 7 years according to a 2012 report by the American Council on Education (Lederman, 2012). In this respect, James Doti's 25-year tenure at Chapman University is quite remarkable. But Doti has an attribute that may have contributed to his presidential longevity — he is a professional economist who studied with some of the very best economists of the 20th century at the University of Chicago, including Milton Friedman, who many consider to be the premier American economist of that century.

As it turns out, economics is an extremely popular subject of study for university presidents. To illustrate, five of the schools currently ranked in the top eight by Forbes Best College list had had an economist serve as president at some point since the year 2000: Morton O. Schapiro (Williams College from 2000 to 2009), Lawrence H. Summers (Harvard University from 2001 to 2006), Richard C. Levin (Yale University from 1993 to 2013), Harold T. Shapiro (Princeton University from 1988 to 2001), and Christina Paxson (Brown University from 2012 until the present). Furthermore, 92 individuals who served as presidents of the 25 top schools (again using the 2015 Forbes Best College list) during the 25-year tenure of President Doti were examined. Nine of those individuals, or nearly 10%, had a Ph.D. in Economics. Also examined were the current presidents at the top 75 schools on the Forbes list. Today, 7 of these 75 schools — 9.3% — are headed by a president with a Ph.D. in Economics — Christina Paxson (Brown University), Lisa M. Lynch (Brandeis University), Rebecca Blank (University of Wisconsin-Madison), Raynard S. Kington (Grinnell College), Jill Tiefenthaler (Colorado College), Catharine B. Hill (Vassar College), and Morton O. Schapiro (Northwestern University). It is noteworthy that despite the fact that around 9% to 10% of university presidents are economists, only around 2% of all doctorates awarded in American universities over the last 50 years were in economics. Thus, a person with a Ph.D. in Economics has around *five times* better a chance of becoming a major university president than one trained in other disciplines.

As the length of Jim Doti's tenure at Chapman is exceptional, we wondered whether university presidents with Ph.D.s in Economics tend to have longer tenures in their positions. We calculated the average tenure of all presidents who served a full term (i.e., we excluded all presidents whose terms were still in progress) between 1990 and the present at Forbes' top 75 schools. We found that the average tenure of a president with a Ph.D. in Economics was 10.7 years while the average tenure of a president without a Ph.D. in Economics was 9 years. This suggests that economists stay around 19% longer in the position of university president than otherwise. Of course, a short tenure could be the result of leaving for a better offer rather than leaving because of a worn-out welcome, so we must be cautious about reading too much into the results.

Finally, we were interested in whether university presidents with a Ph.D. in Economics were more effective at moving their schools up in the rankings during their tenure, as Dr. Doti was able to accomplish at Chapman. To analyze this, we took the

difference between a school's rank in the year that the president began his or her tenure and the rank in the year that the president left (or the current rank if the presidency was ongoing). We had a total of 241 observations of president tenures at top 75 schools since 1991. We found that presidents with a Ph.D. in Economics saw their schools move up in the rankings by an average of 0.75 slots during their tenure. Presidents that did not have a Ph.D. in Economics saw their schools fall in the rankings by 0.39 slots during their tenure. Thus, a president with a doctoral degree in economics would be able to move his or her school up in the rankings by around 1.14 slots compared to other presidents. This is true despite that fact that, as mentioned earlier, economists are overly represented at highly ranked schools and it is more difficult to move up in the rankings from say 5 to 3, than it is to move from 65 to 63.

By all accounts our analysis suggests that university presidents with doctorates in economics are both more highly valued and more successful than their counterparts with a Ph.D. in other fields. Why is that? We would submit it is because most of the critical challenges facing college presidents are economic in character. The single most important feature of modern day higher education in the United States has been the sharp increase in prices — tuition and fees. Economists understand the reasons for price changes and the implications of the scarcity of resources, including the important concepts of opportunity costs and comparative advantage. When a college expands, say, graduate programs in business administration, it likely foregoes opportunities to expand other potentially worthwhile programs — these are opportunity costs. If a school develops strength in a certain discipline and gains a national reputation, it often acquires a comparative advantage in emphasizing that field of study. Generally, nations, businesses and universities promote programs utilizing their comparative advantage. Economists teach these concepts, and successful university presidents can use their mastery of these subjects to their advantage.

Productivity in Higher Education

Economics-trained university presidents are likely to have a strong appreciation for a major reason that college costs have risen dramatically over time — collegiate productivity has stagnated, particularly relative to other areas of human endeavor, such as growing wheat, building cars, operating airlines, or offering information technology services. Over the very long run (since 1870), labor productivity in the United States has risen close to 2% per year. On average, workers make about 2% more goods (or services) per hour of effort than they did a year earlier. This is the basis of our rising standard of living. Wages are closely tied to productivity, so if worker productivity rises by 2% annually (adjusting for inflation), so should wages. Even in areas with little or no productivity advance, wages need to rise by something close to the average for the whole economy or workers will switch to employment in the higher-wage fields and not seek employment in the fields with no wage growth.

In contrast to other industries, productivity in higher education has not risen during the last several decades. As we will demonstrate below, it takes just as many labor inputs to produce a given amount of higher education services today as it did in the early 1970s, at the beginning of the academic careers of Jim and Lynne Doti. And since wages have risen, labor costs have risen sharply in universities even though

productivity has stagnated. Since labor is the dominant input used in producing higher education services, this has forced costs upward, resulting in higher tuition fees and compelling increased efforts by university presidents to secure funds from other sources as well (government appropriations, research grants, and, especially for private institutions like Chapman University, philanthropic contributions with its related endowment income).

To be sure, measuring higher education productivity is very difficult. The “output” of higher education is in large part the value added to students from attending the institution: greater knowledge, better critical reasoning, leadership and communication skills, maybe a better sense of right and wrong, and so forth. But these things are often not measured very well, if at all. We do not even have accurate data on earnings of graduates by schools (although efforts are underway to rectify this), in order to assess the vocational investment returns of specific universities.

But that is only part of the problem. Universities produce many types of outputs. For example, they produce research that creates additions to the stock of knowledge. However, they are also usually in the food and lodging business, not to mention running parking lots and occasionally conference centers. Some of them run big commercial operations, including medical centers that sometimes derive as much income as the rest of the university. And, of course, they are in the entertainment business — hosting sporting events, plays and concerts, and in many cases, running art galleries and museums. Some of these activities are not sold in competitive markets, and thus we do not have objective metrics of their market value as is generally determined by demand and supply considerations.

For example, how does one assess the value of the contribution of an article published in an obscure academic journal which is cited by perhaps one other scholar, read by perhaps 25 persons, and which has next to no impact on the very specialized scholarly area in which the professor is writing? Emory English professor Mark Bauerlein once pointed out that scholarly output on William Shakespeare approaches 1,000 articles a year — or 4 for every business day (1 every 6 hours) (Bauerlein, 2009). It seems inconceivable to us that, at the margin, the majority of those new articles, even if read, will add much valuable insight into the contributions of the Bard, but how do we really know? Any attempt to assess the overall productivity of the staff at a modern university is fraught with peril and potentially serious error.

But that will not stop us. After all, we have tenure, and the consequences of making mistakes in higher education are generally extremely small (the lack of a strong incentive/disincentive system is one of the many causes of slow change and innovation in universities, something economics-trained college presidents acutely understand). We start with an assertion — at most, but by no means all universities and colleges, the overwhelmingly most important mission is related to instruction. Let us say that as a generalization, two-thirds of the “output” of schools is typically related to instruction. That is not true at Cal Tech or Johns Hopkins where research plays a much more important role, but there are far more institutions with modest sized graduate and research programs, and where the focus is on educating students.

One of us argued in a book published a dozen years ago (Vedder, 2004) that university productivity had likely fallen, and certainly not risen, since 1976. Does that

conclusion hold after the passage of more time? We turned to data from the Delta Cost Project, based mostly on the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), and looked at the period 1988 to 2012, which comes close to approximating Jim Doti's tenure as President at Chapman University. Counting part-time workers as one-half of an equivalent full-time employee, we learned that while in 1988 it took 22.21 employees to service 100 full time equivalent students, in 2012 it took actually 3% more at 22.82.

Moreover, this analysis probably understates the increase, as the data show a large decline in university maintenance and service personnel. This decline is almost certainly fictitious as it is largely driven by the movement during the last 25 years of universities to contract out maintenance and food service operations to other providers. Thus, these workers will not show up in the university employee statistics. Adjusting for that, workers per student in higher education almost certainly rose somewhere between 5% and 10%. Using this as a broad measure of productivity — workers per student instructed — productivity in higher education has fallen.

Meanwhile, in the entire business sector over the same time frame, labor productivity rose 68.2% between 1988 and 2012 (Whitehouse.gov, 2015). Take a task that it took 22 workers to do in 1988 in higher education (for example, educate 100 students), and a task requiring the same number of workers in a private business. In 2012, it took 23 workers to do the same tasks in higher education, but typically only 13 workers in business. Thus, assuming no change in the relative compensation of employees in academia and non-academia, in 2012 the labor costs per unit of output in higher education had risen roughly 77% relative to that in the business sector.

The 77% rise in relative labor costs in higher education between 1988 and 2012 suggests an increase of nearly 2.4% a year — adjusting for inflation. We do not think that it is at all coincidental that this increase basically mirrors the rise in inflation-adjusted tuition fees in this period — after all most higher education costs are labor-related. It leads us to tentatively conclude that *the tuition price explosion in higher education is largely the result of rising labor costs per unit resulting from a lack of productivity growth.*

Other Consideration in Measuring Output in Higher Education

To be sure, some caveats are in order with respect to the conclusion above. First, it is possible there have been qualitative improvements — today's students may be better educated than a generation ago. This is possible, but if anything, the data shows there may have been learning decline. Data from both the U.S. Department of Labor and the Higher Education Research Institute at UCLA suggest that today's average student spends far less time on academics than counterparts of a half century ago — and improvements in learning do not seem likely without studying or going to class (Babcock & Marks, 2010). The Adult Literacy Survey data from the U.S. Department of Education (Kutner et al., 2006) shows some decline in literacy amongst college graduates over a large part of this period. Arum and Josipa (2010) show that contemporary students show very little gain in critical thinking and writing skills over the college years.

It is also possible that there has been a surge in productivity outside of the instructional area of higher education. Suppose teaching is two-thirds of what higher education is all about, and research and other things comprise the remaining third. As

active researchers, we can attest that advances in word processing and communications have meant that research can generally be carried out more efficiently today than in 1988 before the widespread use of email, personal computers, or the internet. Papers that were formerly typed and mailed in triplicate to journals for consideration can now be sent instantaneously via electronic submissions. Word processing means that revisions can be made much more easily than in the days of manual typewriters. Journals that formerly took nine months to get back to authors with a decision on a manuscript, now generally get back in three or four months.

Of course the question still remains about the economic value of this research. We completely agree that universities, especially at the “Research-1” level, are producing impactful work that at minimum adds to humanity’s basic knowledge set, and in some cases may even lead to scientific breakthroughs that can extend or improve the quality of life. According to the Bureau of Labor Statistics there were 1.31 million college professors in 2014 (U.S. Department of Labor, n.d.). Suppose, on average, each completes 1.5 scholarly endeavors (books, journal articles, artistic pieces, musical compositions, etc.) per year. This suggests that universities produce around two million units of scholarly output each year. But what portion of these actually have “value” in the economist’s sense (economists define value based on the willingness of society to pay for a good). In truth, in the last several years, academia has seen a scandalous rise in “pay to publish” journals whereby authors pay hundreds of dollars to an online journal to nominally peer review and then publish their work, often within two to four weeks of submission. Jeffrey Beall, a librarian and associate professor at the University of Colorado at Denver has compiled a long list of such “predatory” journals (Butler, 2013). To apply this to another sector, it would be like the farmer paying customers to eat his corn or coffee shops paying customers to drink Americanos. Some professors engage in this activity because their employment may depend on producing scholarly output, often so that the college can remain accredited by external agencies.

Still, despite our misgivings about its accuracy, let us suppose productivity is rising at the national norm of 2% per year in the non-instructional aspects of higher education. Given a 2% rise in that one-third share, and a small decline in the remaining two-thirds share, total labor productivity in higher education would be rising by around 0.6% a year. This we believe is an upper bound.

Are College Amenities Part of the Productivity Problem?

One of us (Taylor) has, for the last two years, taught a freshman honors seminar dealing with the way universities operate and why the cost of tuition has been rising so dramatically. Of all the items discussed in this class, perhaps the most surprising figure students encounter is just how much of a university’s resources (in both dollars and in staff) go toward non-instruction. Interestingly, the students generally reached a consensus (though some disagreed) that college today is as much (or more) a consumption good as it is an investment good. Louisiana State University was criticized roundly for raising student fees by \$150 per semester to build an \$85 million “lazy river” in the shape of the letters “LSU,” but the students in 2011 voted overwhelmingly in support of this project — 84% voted yes. The students at LSU

valued the lazy river more than the additional fees that they knew they would have to pay. News accounts report increasing levels of elaborate amenities such as these at many schools. Highpoint University, for example, apparently offers students valet parking. It is well known that college is generally much cheaper in Europe than it is in the United States, but European colleges are much more focused on instruction rather than experience and this almost certainly contributes to the cost differences.

Community colleges in the United States are much more like European colleges in that they offer far fewer amenities (climbing walls, pop concerts, modern workout centers, posh housing, food courts, museums, etc.). And, of course, they are far less expensive than four-year universities. Today, approximately 7 million students attend community colleges while 13.2 million attend four-year colleges and universities (National Center for Education Statistics, n.d.). The fact that so many students forgo community colleges and jump right to four-year schools suggests what economists call a “revealed preference” for the amenities and lifestyle that a university can offer despite its higher cost. That does not mean that universities necessarily are offering the optimal amount of amenities. Indeed, it has often been suggested that universities are engaged in an “arms race” scenario with respect to amenities. Game theorists would say that universities face a “prisoner’s dilemma” scenario whereby the collective best action is for each university to spend less on amenities, but it is individually optimal for each to spend more. Less spending by one school when all others are increasing amenities means that one school will be at a strong disadvantage when it comes to enrollment numbers as well as student quality.

What can we say about productivity with respect to offering amenities? University libraries are typically one of the largest buildings on campus. According to the Department of Education (2015) the average number of volumes per full-time equivalent (FTE) student in degree-granting post-secondary school libraries was 69 in 2011-2012 (National Center for Education Statistics, n.d.). Given massive changes in technology over the last two decades, libraries are valued far less by students, and faculty, as a source of information than they previously were. Students look up information online and faculty often access journal articles online rather than walking to the library to review physical copies. Courant and Nielsen (2010) estimate that it costs \$4.26 per year to hold and preserve a physical copy of a book in the common “open stack” library format, but that companies like HathiTrust and Internet Archive can provide a fully mirrored digital archive with full backup for \$0.15 per book, per year. Employing the average of 69 volumes per student number from above, this suggests that universities can save up to \$284 dollars per student [$(\$4.26 - \$0.15) * 69$] per year by converting to digital holdings. Public university libraries within the same state system can also save by engaging in collaborative storage networks, consortium purchasing, and license sharing. In the private sector, where costs are constrained by market discipline, these are the kinds of moves that have been made so as to achieve the 68% jump in productivity between 1988 and 2012. The Department of Education data show that between 1991-92 and 2011-2012 academic years, the number of books in university libraries did fall, but only by 4% (from 72 to 69 volumes per FTE student). This is just one case where universities are under-embracing new modes of operation that could result in higher productivity.

New Layers of Administration: Part of the Problem?

Universities need academic support staff in order to disseminate knowledge. Registrars are needed to record the accomplishments of students, bursars are needed to collect tuition payments, deans of students are needed to deal with disciplinary and other issues relating to student behavior, and development officers raise money from private sources. Yet these and other support activities, however useful, do little or nothing to directly impart knowledge to students or lead to the discovery of new truths. One could argue that a good institution is one which minimizes the costs of what we can loosely call “administrators,” thus allowing more resources to directly meet the core functions that define a university — teaching and research.

In the 1929-30 academic year, 8.4% of university spending was for “administration and general expenses,” a proportion that had risen to 14.6% by the closing years of the 20th century. Meanwhile, spending on “instruction” fell from about 44% in 1929-30 to slightly over 30% in 1995-96 (Vedder, 2004, p. 44). The trends have continued in this century. Looking at public institutions, in 2000-2001, 30.42% of expenditures went for instruction. However, by 2013-14 this had fallen to only 26.46%. Tuition fees ostensibly cover the cost of instruction, but “instruction” is increasingly becoming an almost minor portion of university spending.

The creeping bureaucratization and the increasing de-emphasis on instruction appear to be significant factors in the productivity stagnation besetting the modern university, and thus a meaningful contributor to rising costs. Adding to the problem has been some escalation in compensation to administrative staff. Salaries of university presidents, for example, have risen noticeably in recent years, the exact extent of which is difficult to measure in part due to increasingly complex contract provisions (elaborate fringe benefits such as club memberships and use of private aircraft, deferred compensation payments, and the like). Annual payments of tens of million dollars to managers of large university endowments — unheard of decades ago — are common at highly endowed schools. And, of course, the salaries of coaches have exploded at many colleges and universities. University of Alabama football coach Nick Saban is the highest paid government employee in the country with a salary of \$7 million (Braverman, 2016).

As previously indicated, university presidents trained in economics should be especially aware of the opportunity costs of bigger and costlier administration. Money spent on administrators could be spent on instruction — or devoted to tuition reduction. An interesting question left open for future study is whether university presidents who hold a Ph.D. in Economics preside over universities that allocate resources differently than otherwise?

Conclusion

The cost of college tuition has risen at a rate that is far higher than almost any other sector in the economy, including health care, over the last two generations. We contend that the major reason for the increase in the cost of college relative to other sectors is the lack of growth in productivity in higher education. In 1988, it took around 22 full time workers at a university to educate 100 students. Today it takes around 23 workers

to achieve the same outcome as productivity has fallen in higher education. In other parts of the economy, where productivity rose over 68% between 1988 and 2012, a task that 22 workers could accomplish in 1988 can today be accomplished with around 13 workers. Despite the stagnation in productivity, faculty and staff compensation has risen at a similar rate to other parts of the economy since wages are largely a function of alternative employment opportunities. This is, we believe, the primary reason that the cost of higher education has risen dramatically relative to other sectors of the economy.

University presidents would, under any circumstances, face enormous challenges in leading a group of employees with highly disparate interests and objectives. But the lack of productivity growth compounds these challenges dramatically. Yet some, like Jim Doti, have risen to this challenge and seen their schools rise in the rankings. We believe that the training of Dr. Doti, as well as that of his spouse, Dr. Lynne Pierson Doti as economists may have something to do with his success. Our analysis of 242 university presidents who have served a stint at a school in the current top 75 found that universities who had a president holding a Ph.D. in Economics moved up in the rankings by an average of 0.75 slots during the president's tenure and that schools with non-economists serving as president fell 0.39 slots. University presidents with a doctorate in economics also had a 19% longer tenure in office than those without one. It is no wonder, then, that over the last 25 years, nearly 10% of all university presidents at top schools had a Ph.D. in Economics, even though only around 2% of all doctorates have been awarded in this field over the last 50 years. Economists are trained to deeply understand scarcity, incentives, and the consequences of productivity growth — or a lack thereof. These are skills that a university president almost certainly values at a premium. Being an economist who trained at the University of Chicago when its faculty included towering figures in the field such as Milton Friedman, George Stigler, Robert Mundell, and Gary Becker — all Nobel laureates — Jim Doti understood the hand he was dealt in 1991 when he assumed the Chapman presidency. And he used his knowledge to position Chapman to operate successfully in an environment where success is difficult to measure and even more difficult to achieve.

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Banking and Entrepreneurship

Lynne Pierson Doti and the Economic History of Unregulated Money and Banking

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Currently, the theoretical literature on unregulated banking (free banking) is extensive. However, the empirical evidence of unregulated banking is thin, relative to the empirical evidence underlying regulated banking. The purpose of this article is to argue that Lynne Pierson Doti's work on Californian banking in the 19th century offers an underappreciated but important roadmap for future research regarding banking activities in unregulated environments. Replicating studies like that of banking in California would enlarge the corpus of empirical evidence regarding free banking theory.

In the wake of the financial crisis of the late 2000s and of the weak recovery that ensued, financial history has emerged as something of a “hot topic”. Unfortunately, the emerging new literature is based on an implicit assumption: that regulation is desirable. Given the (quite debatable) belief that the financial crisis was caused by too little regulation, this assumption is quite understandable. However, this is a faulty assumption.

Since the 1980s, there has been emerging literature on unregulated banking and free banking (I will use the two terms interchangeably). This literature is at its strongest on theoretical grounds (Selgin, 1988; White, 1984, 1999; Horwitz, 1992; Selgin & White, 1987, 1994). George Selgin, one of the fathers of this school of thought, compared his endeavor as making the theory of free banking as relevant to the study of banking as the theory of free trade is relevant to the study of international trade. Selgin and White (1994) stated that:

Just as the positive understanding and normative assessment of tariffs require the hypothetical benchmark of pure free trade, so the understanding and assessment of current monetary regimes require the hypothetical benchmark of pure monetary laissez-faire (p. 1718).

In essence, theorists of free banking suggest that financial institutions are capable

of regulating the money supply in order to meet changes in money demand without creating bubbles. The most interesting aspect of this literature is the idea that monetary systems are evolutionary and, if unregulated, can adapt easily to shocks and strengthen as a result (Selgin & White, 1987; Horwitz, 1992). Basically, monetary systems emerge out of unhampered human action.

These theorists have provided some case studies, notably Scotland in the late 18th and early 19th centuries and the private coining of money in England during the early days of the Industrial Revolution. The case most often referred to is that of Scotland which was related in the work of White (1984), although there have been some criticisms towards the validity of this particular case (Sechrest, 1993). In terms of private coinage, the study of private mints in England during the French Wars and the early days of the Industrial Revolution by George Selgin (2008) is probably the best example one can think of. These cases, which support the theory of unregulated banking, are quite few in numbers relative to those supporting the literature on “regulated banking”. Since free banking and unregulated banking episodes occurred mostly in the late 19th to early 20th century, this relatively small empirical literature has been mostly investigated by economic historians. Further evidence regarding the viability of unregulated banking needs to be collected in order to advance the case for free banking. In that regard, the works of Lynne Pierson Doti are interesting for those who might wish to further investigate this field. Concentrating on a frontier economy, that of California, Doti showed the story of a monetary system that evolved from barter to a stable and well-advanced banking system in less than a few decades. Her research is not only a strong piece of supporting evidence for the theoretical literature mentioned above, it also provides a template of research for scholars interested in banking history.

The Evolution of Monetary Order

In their work, Selgin and White (1987) argued that there were three stages to the evolution of a free banking system. The first is the evolution of a system of money transfers that avoid the transportation of specie. The second is the creation of negotiable bank liabilities, and third, the emergence of a clearing system for money. At the core of this idea of the “evolution” of free banking is the concept that (robust) monetary institutions can emerge out of unhampered human action (Horwitz, 1992, p. 114). More specifically, self-interested behavior on the part of individuals may generate institutions that create a stable framework of exchange enabling the coordination of production by many individuals. Money is an example of such an evolving process (Menger, 1892). Small tribal communities may use barter by sheer virtue of their size and the simplicity of exchanges undertaken between tribe members. However, if exchanges become more complex and the size of a society increases, achieving the double coincidence of needs becomes harder. Thus, barter becomes a costly monetary institution and alert entrepreneurs have an incentive to find a marketable commodity (gold, wampum, and shells) that will be commonly accepted by others (White, 1999, p. 6-7). But this new monetary institution is suited to the context of a relatively simple economy. As an economy grows in size and complexity (more long-distance

trade for example), carrying coins, wampum, or shells for trade becomes costly. In such cases, an alert entrepreneur can provide warehousing services which transfer money via accounting books, thus avoiding the costs of evaluation and transport of money (Selgin, 1988, p.19). Eventually, these warehouses use the deposits they have to finance productive investments and offer interest on deposits. Progressively, claims against these warehouses (which have now become banks) start to circulate and, as more banks appear, prompting the need for notes exchange, clearinghouses eventually emerge. None of these stages are planned. They emerge through self-interested individuals pursuing the satisfaction of their desires.

The finest virtue of emerging monetary orders is that they are impressively stable and they sustain economic growth. For example, the Scottish Free Banking system, which is considered to be one of the closest to a case of pure free banking, exhibited low rates of failure and created a stable banking system in the otherwise messy world of the time (White, 1984). Similar systems like the one observed in Sweden generated similar outcomes (Ögren, 2006). Less optimistic assessments mentioned higher rates of failure which were compensated by higher rates of output growth as poor banks were eliminated (Bodenhorn, 1990; Ager & Spargoli, 2013). But overall, the results were seen as generally very positive (Schweikart, 1991; Dowd, 2015). Arguably, one key feature of a free banking system is its ability to withstand the shock of demand for money by changing their reserve ratios (Gerlach & Kugler, 2015).

Lynne Pierson Doti and Banking in California

The work of Lynne Pierson Doti is a highly instructive attempt to illustrate the emergence of an unplanned monetary system. Doti's work on banking concentrates on the American West, but mostly California (Doti, 1978, 1991, 1995; Doti & Runyon, 1996; Doti & Cassell, 1997; Schweikart & Doti, 1998). Broadly speaking, her work tells the story drawn by Selgin and White (1987) and Horwitz (1992) but over a very short time frame — a few decades at most.

In essence, 19th century California was a frontier economy — far removed from economic centers, thinly populated, recently settled where labor and capital were scarce but land was abundant. Early settlements generally had very simple economies centered on the production of a very limited range of produce. This was also the case in Canada, where French settlers during the 17th century traded in wampum and fur pelts and paid their duties, tithes, and taxes in wheat and peas (Heaton, 1928). Early American settlers in the 17th and 18th centuries also predominantly resorted to barter (Hummel, 1978). According to Doti, most trading in California was done by barter until the 1830s (Schweikart & Doti, 1998). As the economy of California grew, cries of “specie scarcity” grew louder and there were complaints about the absence of banks. Historians have too often been willing to accept these cries as well-founded. Rarely do they point out the crucial difference between shortage of money and denominational shortages. By definition, there can be no shortage of money. However, because of transaction costs, there can be shortages of small denominations (e.g., Selgin, 2008; Timberlake, 1993). With the gold rush in the late 1840s, private mints emerged very quickly and thereafter, banks as well. The gold rush into California meant rapid and

deep changes to the structure of the local economy. Simultaneously, there was an important increase in living standards for Californians — some of which included a desire to send remittances back east to their families as well as use their newfound wealth to acquire goods from elsewhere. In such a situation, the transport, storage, and minting of gold represented a major impediment to trade. To answer this issue, Schweikart and Doti (1998) pointed out that banks rapidly emerged out of merchant stores that acted as bankers in practice. These merchants issued drafts which were sufficiently trusted for Californians to exchange them for gold in order to simplify transactions. These banks also issued notes for very low denominations – some for as little as 25 cents which was the standard price of a shot of whiskey at the time (Doti & Runyon, 1996). Progressively, stores acting as banking-services providers emerged into formal banking, issuing their own bank documents which acted like notes (Schweikart & Doti, 1998). Banks invested considerably in advertising the safety of their facilities (Schweikart & Doti, 1998) which created brands of banking trusted by consumers (Horwitz, 1992).

The pace of California banking development was remarkable. In contrast, consider the case of Canada where the first bank emerged in 1817 (Shortt, 1986). In Canada, when it was under French rule, unlike California, private mints were prohibited to exist since all coinage had to be made in France. The emergence of private mints in capital-scarce California is a notable fact and a strong endorsement of the view that unregulated monetary systems can generate welfare-enhancing outcomes. In Canada, colonial governments frequently attempted to design monetary systems — most of which ended very poorly. From the 1680s to the 1710s, the French colonial administration issued money notes printed on the back of playing cards which were backed against incoming gold shipments from France. The note issues became increasingly large and were backed against increasingly dubious assets (notably, securities drawn against the Parisian Parliament and shipments of fur pelts to Europe). The experiment ended in failure and a widespread distrust in paper notes. Many observers complained that the peasants of Canada returned to barter. It was later repeated in the 1750s which led to further distrust of promissory notes (Armstrong, 1984). Even in the first years of free banking in Canada, there was widespread distrust toward paper money which seems to have been fueled by the prior attempts to design a monetary system. It was only with the emergence of private banks like the Bank of Montreal that bank notes emerged. In the interceding years, Canadians frequently complained about the scarcity of small denominations (Redish, 1984) and the poor quality of the money supply. These denominational hindrances encouraged barter, swaps, and exchanges in kind. These were costly exchange devices (Timberlake, 1993). It was only with the emergence of private banks that the popularity of such devices lessened as banks had a strong incentive to monetize exchanges. In California, the evolution from barter to well-developed clearing houses took less than four decades. Complaints about the scarcity of specie were seen by alert entrepreneurs as profit opportunities and they rapidly responded. Yet both economies had similar initial situations: frontier areas with very small populations far removed from commercial centers. In fact, Canada had slightly better conditions since its initial settlement basins had access to the Atlantic Ocean when they were not ice-locked and were in close proximity to the United States.

By contrast, California was isolated. The fast pace of the evolution of the Californian banking system was quite significant when seen in this contrast.

What is more impressive is that this occurred in spite of government action. Kevin Dowd (2015) pointed out, in his survey of the free banking experience in the United States, that California basically prohibited banking but that the outcome of this ban produced uncertain results. Indeed, the first draft of the Constitutional Convention of 1849 basically prevented banks from issuing bank notes. However, the final version of the Constitution had certain loopholes which permitted a relatively unregulated banking system but imposed restrictions on the issuance of money. However, most individuals did not take notice or care. According to Doti, “banking continued to develop and numerous documents exist from the period that are indistinguishable from bank notes” (Doti & Cassell, 1997, p. 312). She points to some examples, such as the acceptance without question of a note from a month-old bank at a restaurant (Doti & Cassell, 1997). Schweikart and Doti (1998) summarized the failure of this ban in the following quote:

In reality, the constitution and the legislature’s stipulations regarding paper money and banks already had been rendered obsolete and irrelevant by the market, which daily saw hundreds of miners exchange gold for drafts – a reality to which the legislatures finally acceded (p. 221).

What is noteworthy is that this banking system thrived in a hostile environment until 1905. Until the enactment of the National Banking Act during the Civil War, the United States operated under a free banking system regulated at the state level. After the adoption of federal banking legislation, severe restrictions were imposed on banks — taxes on notes, capital requirements, etc. However, states were still free to regulate and charter banks (Doti & Cassell, 1997). The state of California (alongside Illinois) was one of very few states that maintained a relatively unregulated banking system up to 1905. In 1862, savings banks were allowed to incorporate and, in 1864, they were permitted to carry on commercial activities if their capital stock was greater than \$300,000 (Doti & Runyon, 1996). In essence, regulations were so loose that the distinction between commercial and savings banks was purely semantic. The 1878 California Banking Act illustrates very well this lax form of regulation. Banks only had to pay a licence fee, file reports, and submit to audits. The following year, the banking-related sections of the state constitution were dropped (Doti & Runyon, 1996). This meant little banking regulation in California while the National Banking Act was tightening the regulatory framework.

And yet, the rapidly evolving financial system of California was quite stable. In the book version of her doctoral dissertation, Doti (1995) observed a strong level of competition between banks with very diversified strategies. As Schweikart and Doti (1998) pointed out, the adoption of branch banking in California, which was not prevalent elsewhere in the United States, created a system that remained stable. Failures grew increasingly less frequent between 1878 and 1905 as well as the relative importance of those failures (Doti & Runyon, 1996) — which was an achievement by itself — given the inability of the National Banking Act to generate a stable system

at the national level (Bordo, Rappoport, & Schwartz, 1991; Grossman, 1993). It also seems to have been widely trusted and accepted since Californians selected a variety of exchange mechanisms that matched their needs and desires. Essentially, exchange mechanisms were privately developed (those that emerged organically as opposed to those designed as a result of government intervention).

Taken together, the story of the California banking system told by Doti offers strong support to the proposition that monetary order does not need to be planned. A frontier society with a population boom following a resource boom managed to generate a robust financial system with very little guidance from government and probably in spite of government. Given California's rapid economic growth observed between 1880 and 1910 (Klein, 2013), the role that a stable banking system might have played in harnessing savings for productive uses is considerable.

The manner in which Doti developed her proposition is also relevant. Instead of being concerned solely with econometric estimates (which are crucial to determining the proper importance of certain factors), Doti linked economic history and business history together. In her work, one can move from data-driven results to examples of particular bankers and merchants and their role in the emergence of this organic monetary order. This is quite important. Consider in comparison, George Selgin's (2008) work on the emergence of private mints in England. Selgin's (2008) main question was how the shortage of small denominations in England at the onset of the industrial revolution was hindering growth and development. His answer was that private mints did emerge and produced token coins which were widely accepted and, as a result, made transactions easier and cheaper. While some data is used to frame the wider issue, Selgin's (2008) main attention went to the individual minters and how they crafted solutions to very real problems, including how artwork was used to avoid counterfeiting. His work is about economic history, but it reads like a piece of business history. In an evolutionary monetary order, different conditions might generate different solutions. In studying the business history of this process, one showcases the wide variety of solutions that can be brought about to create spontaneous order. In Doti's work, considerable attention was given to the business history of banking in California which made her work exactly like that of Selgin's regarding private coinage. In telling the business history side of things, the evolutionary process no longer appeared like a dry economic process but instead as a vivid story of human ability to generate strong and robust institutions in the absence of a master plan.

Conclusion

Other areas are worth considering if one wishes to expand on Doti's work. For example, Illinois was another state that maintained a relatively free system after the Civil War — an exception worth studying. Many countries are worthy of attention similar to that which Doti gave to California. The Canadian provinces had different rules regarding banking in their early days and very different experiences emerged. As previously mentioned, Canada was a frontier economy just like California and should be a prime candidate for the study of free banking. Until now, Canada's free banking system prior to Confederation in 1867 has received little attention. However, if one

follows the template drawn by Doti, one could use Canada to draw out what local conditions, endowments, and constraints affected the course of the evolution of that country's banking system.

By adding Canada, Illinois, or other regions, a picture of the evolution of the “organic monetary order” would emerge from which broad stylized facts could be established. This would help to build a strong counter-argument to those who argue for the need for more regulation (or smarter regulations). But more importantly, it would vindicate the claim that we should treat free banking like we treat free trade. Pure free trade may never exist. Pure free banking may never exist as well. Nonetheless, we use pure free trade as counterfactual to understand the effects of barriers (both natural and man-made) as we should use pure free (unregulated) banking as a counterfactual for assessing the effects of barriers and regulations. While we have a considerable quantity of examples that support the use of such counterfactual in international trade, we do not have the same supply of examples with regard to free banking. Lynne Doti's work increased that supply by providing a striking example and has given a template to further increase that supply.

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Entrepreneurial Characteristics and Careers: American High-Tech Entrepreneurs

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The dramatic success of American entrepreneurs has long captured the interest of the nation. Entrepreneurs are perceived by many to illustrate the American Dream. In American Entrepreneur: The Fascinating Stories of the People Who Defined Business in the United States (2009), Larry Schweikart and Lynne Pierson Doti explore the history of American entrepreneurs and their impact on the American economy. To honor the research legacy of Lynne Doti, this paper will examine the characteristics and careers of high-tech entrepreneurs within the framework of our previous research on one of the entrepreneurs highlighted in their book by examining the early influences, reconnection, transformation, reflection, and death stages of Steve Jobs' career.

In their book *American Entrepreneur: The Fascinating Stories of the People Who Defined Business in the United States* (2009), Larry Schweikart and Lynne Pierson Doti explored the history of American entrepreneurs and their impact on the American economy. They followed entrepreneurs from early colonial times through the internet age and “the most important invention of the late twentieth century, the personal computer” (Schweikart & Doti, 2009, p. viii). Schweikart and Doti (2009) gave considerable attention to the impact that high-tech entrepreneurs have had on the American economy.

Moreover, the dramatic financial and business success of high-tech entrepreneurs such as Steve Jobs of Apple, Bill Gates of Microsoft, and Mark Zuckerberg of Facebook has captured the interest of millennials. The ‘entrepreneurial generation’ is a term given to the growing number of millennial students at American universities and colleges who express an interest in pursuing an entrepreneurial career (U.S. Chamber of Commerce Foundation, n.d.). Research suggests that half to two-thirds of millennials are interested in entrepreneurship (Buzz Marketing Group and the Young

Entrepreneur Council, 2011). Some research on entrepreneurial intentions suggests that millennials' impressions of entrepreneurial careers may be strongly influenced by the high profile success stories of entrepreneurs (Hurley-Hanson & Giannantonio, 2016). Other factors influencing millennials' intentions to pursue an entrepreneurial career include a stagnant economy, high unemployment rates, and the perception that jobs in the corporate sector will not offer millennials the opportunity to do work that is important to them, nor allow them to achieve greater levels of work/life balance than their parents experienced.

The large numbers of millennials interested in pursuing an entrepreneurial career has resulted in a dramatic increase in the number of college courses and university programs focused on entrepreneurship, illustrating how the economic principles of supply and demand affect academic offerings. Business schools are devoting resources to the creation of startup incubators, centers for innovation, and centers for entrepreneurship, such as Chapman's Ralph W. Leatherby Center for Entrepreneurship and Business Ethics which Lynne Pierson Doti was the Director of from 1999 to 2002.

Academic interest in entrepreneurship has exploded in recent years with the growth of Ph.D. programs, endowed chairs, and journals devoted to the study of entrepreneurs and entrepreneurship. These scholarly activities often focus on the definition of entrepreneurship, the characteristics of entrepreneurs, and the conditions that lead to entrepreneurial success. Schweikart and Doti (2009) contributed to this stream of research by asking two central questions about entrepreneurs. The first question, "Is there an entrepreneurial character?", asked what a typical entrepreneur is like. The second question, "Is there an entrepreneurial life pattern?", focused on the career and life stories of entrepreneurs across history. In an effort to honor the research legacy of Lynne Doti, this paper will consider the two questions posed in Schweikart and Doti's book by examining the characteristics and careers of high-tech entrepreneurs in the context of our work on entrepreneurial careers. We focused on the high-tech industry for two reasons. The first being the American public's fascination with these entrepreneurs. The second reason being how important the creation of the high-tech industry has been to the history of the American business economy. According to Schweikart and Doti (2009), "individual entrepreneurs, such as Steve Jobs and Steve Wozniak, were revealing a future in which the personal computer would change the way people worked and played" and "the revolution over which they presided was nothing short of spectacular", which changed our perceptions of entrepreneurs and entrepreneurship forever (p. 459, 366).

Entrepreneurs and Entrepreneurship

Definitions of entrepreneurs and entrepreneurship have long been debated in the management literature. Early theorists "accepted a definition of the entrepreneur as one who takes the risk to start a business", a phrase generally attributed to Jean-Baptiste Say, a French writer (accounting for the French origins of the word) who first defined production as composed of three factors: land, labor, and capital (Schweikart & Doti, 2009, p. 9). Entrepreneurship has been defined as innovation (Schumpeter,

1958), initiating, maintaining, and developing a profit-oriented business (Cole, 1965), making significant decisions about changes which affect the resources of a company (Sawyer, 1958), risk-bearing (Mill, 1848), ultimate formal authority within an organization (Weber, 1917), making changes in strategy for an existing firm that alter the state or pattern of resources deployment (Ginsberg, 1988), and the person who takes the risk to create material wealth in the economic realm (Schweikart & Doti, 2009). Other definitions of entrepreneurship include entrepreneurial activity that takes place within an existing company (Block & MacMillan, 2003; Guth & Ginsberg, 1990; Stopford & Baden-Fuller, 1994; Schendel & Hofer, 1979) and purchasing an existing business (Cooper & Dunkelberg, 1987; Wright, Robbie, & Ennew, 1997). An inclusive definition which permits a broad exploration of entrepreneurship is “a process by which individuals — either on their own or inside organizations — pursue opportunities without regard to the resources they currently control” (Stevenson, Roberts, & Grousbeck, 1989, p. 23).

More recent research on entrepreneurs has focused on identifying and classifying different types of entrepreneurs. Entrepreneurs can be categorized as novice and habitual (Plehn-Dujowich, 2009). Novice entrepreneurs form only one company, while habitual entrepreneurs start more than one firm (Wright, Westhead, & Sohl, 1998). Habitual entrepreneurs can be further classified into two types: serial entrepreneurs and portfolio entrepreneurs (Wright et al., 1998). Serial entrepreneurs start more than one firm, but they do not retain the previous firm. They leave or close their current entrepreneurial venture before starting a new one, creating a series of entrepreneurial ventures. Portfolio entrepreneurs start more than one firm, but they do not leave their previous firms, having more than one firm operating at the same time (Wright et al., 1998). In the United States, 10% to 20% of entrepreneurs are portfolio entrepreneurs, while in Europe, the number is higher at 12% to 25% (Carter & Ram, 2003; Plehn-Dujowich, 2009). In the United States, 12% to 15% of entrepreneurs are serial entrepreneurs, while in Europe, the number is higher at 18% to 30%.

Serial entrepreneurs can be further broken down into two categories: venture repeaters and opportunistic serial venturers (Wright et al., 1998). Opportunistic serial venturers are entrepreneurs who want to develop a new firm and are actively looking for opportunities. Venture repeaters usually start the next venture out of necessity or in response to their current situation. Reasons why they may have had to leave the company they founded include low company performance, being forced to leave the firm, and a desire to start a new venture. (Wright et al., 1998). Steve Jobs, who was forced to leave Apple, would be classified as a venture repeater entrepreneur.

Early studies of entrepreneurs can be traced back to the 19th century when books were written about business tycoons such as Astor and Vanderbilt. An entrepreneur was defined as any successful businessman and the assumption was that an entrepreneur was the owner of the firm. Early historians described the entrepreneur's motivations as material wealth, public recognition and esteem, and the welfare of society. His distinguishing qualifications were hard work and good luck (Livesay, 1982). More formal academic research on entrepreneurs is generally traced to the 1920s when N.S.B. Gras and his colleagues at Harvard attempted to relate the business executive to the management of the firm and the socioeconomic environment in which firms operated.

These Harvard academics produced a stream of case studies on business executives and firms (Livesay, 1982).

Some research on entrepreneurs has drawn from the fields of psychology and sociology. Studies on the psychology of entrepreneurs look at the distinguishing psychological characteristics of entrepreneurs. These characteristics have been correlated with entrepreneurial performance in an attempt to predict who will become a successful entrepreneur. The three factors most often studied in relation to entrepreneurs are psychological influences, personal characteristics, and the effects of previous experience (Brockhaus, 1982). Sociological theories of entrepreneurship examine how the environment affects entrepreneurship. McClelland (1961) felt that societies with a high need for achievement fostered entrepreneurship. Some factors studied in sociological research include the political climate (Shapero & Sokol, 1982), governmental policies (Singh, Tucker, & House, 1989), local, state, and federal taxation levels (Galvin, 1978), the cultural climate (Shapero & Sokol, 1982), the availability of venture capital (Shapero & Sokol, 1982), the availability of low-cost facilities or land (Quirt, 1978), and accessibility to transportation (Schary, 1979). Research on family (Borland, 1974), peers (Draheim, Howell, & Shapero, 1966), previous work experience (Cooper, 1971), and ethnic groups, classmates, colleagues, and mentors (Shapero & Sokol, 1982), have all been shown to have significant effects on entrepreneurs.

There is little research focusing on why people become certain types of entrepreneurs such as serial or portfolio entrepreneurs (Parker, 2014; Ucbasaran et al., 2008). Research has found that firms founded by novice entrepreneurs are less successful than firms founded by serial entrepreneurs (Holmes & Schmitz, 1996; Headd, 2003; Plehn-Dujowich, 2009). Out of the 1,426 billionaires in the world, 960 are self-made. Out of these 960, only 130 made money from a single business (Infographics, 2015). Serial entrepreneurs have also been found to remain entrepreneurs longer than novice entrepreneurs (Quadrini, 1999; Taylor, 1999; Burke, Felix, & Nolan, 2008; Blanchflower & Oswald, 1998). There is some evidence that serial entrepreneurs may be very focused on developing their idea, but may become restless once a venture is up and running. This may lead them to begin searching for their next venture (Dishman, 2013). Serial entrepreneurship may also be a way for these entrepreneurs to take their ideas to a new level. They may be able to turn their original idea into an entirely new business as Jack Dorsey did with Twitter (Dishman, 2013). Evan Williams, co-founder of Twitter, is another example of a serial entrepreneur who improved his ideas and created new ventures serially. He first founded the web application company Pyra Labs in 1999. Once he sold Pyra Labs to Google in 2004, he founded Odeo, a podcasting company. He sold Odeo in 2007 and then co-founded Twitter (Mark & Parker, 2011; Parker, 2014).

Entrepreneurial Character

The first question addressed in this paper “Is there an entrepreneurial character?”, asked what a typical entrepreneur is like. We explored this question by using a sample of current high-tech entrepreneurs and analyzed three sets of variables: demographics, family background, and work and non-work experiences (Hurley-Hanson & Giannantonio, 2015). Demographic variables included age, gender, and birth order.

Family background variables included having parents who were entrepreneurs, or an absent father and unsupportive mother. Work and non-work experience variables included education, age at first job, age at first job in a high-tech company, industry specific experience, early successes and failures, managerial experience, and other notable work and non-work experiences.

Demographic Variables

Although we hear a lot about young high-tech entrepreneurs in Silicon Valley such as Mark Zuckerberg, there are many examples of high-tech entrepreneurs who started their firms at a later age. Robert Noyce started Intel at 41. Craig Newmark founded Craigslist at 42. Niklas Zennstrom was 37 when he created Skype (Digital Synopsis, 2015). Many well-known stage and developmental career models such as Super (1980) and Levinson (1978) linked the stages of their career models to specific chronological ages. Some researchers have questioned whether specific ages should be linked to career stages (Leonard, Matthews, & Bowes, 1987). Previous research on entrepreneurship has illustrated that entrepreneurial careers can happen at many different ages (Katz, 1994; Shaver & Scott, 1991; Singh & DeNoble, 2003; Schweikart & Doti, 2009) including those who are over the age of 40 (Stangler, 2009; Wolverson, 2013). With the success of relatively young entrepreneurs such as Jobs and Zuckerberg, it may be necessary to rethink what the early career stage looks like for today's very young, very successful entrepreneurs. With entrepreneurial activity (and success) occurring even before the entrepreneur leaves college, it could be argued that the age norms associated with the early career stage do not accurately reflect the career experiences of high-tech entrepreneurs.

Age norms are defined as "widely shared judgments of the standard or typical age of a person holding a role or status" (Lawrence, 1988, p. 310). In organizations, age norms may accurately reflect how organizations operate, but in many organizations they have been found to be inaccurate perceptions of age distributions within the organization (Lawrence, 1996). While research has found that most companies are founded by older individuals, Steve Jobs defied entrepreneurial age norms. He started his first company, became a millionaire in his twenties (Wolverson, 2013), and was fired from the company he founded at thirty. In his thirty-year career, he started and sold numerous companies. Jobs' entrepreneurial activities occurred at several ages. The career paths of Steve Jobs, Mark Zuckerberg, and others that have followed in their footsteps, suggest that age norms for entrepreneurs are shifting, if not radically changing.

Research traditionally finds that men are more likely to start new firms than women (Reynolds & Miller, 1989). The biases that prevent the participation of women and other minorities in entrepreneurship need to be investigated. This seems to be especially true in the high-tech industry. Forbes' list of the Top 25 Hottest Tech Stocks revealed that none of the stocks had female CEOs, and only 13% (1.9% in technical positions) of senior managers were women. In Fortune 500 companies, only 16% (1.7% in technical positions) of senior managers were women. A Business Insider's list of the 40 Hot Start-ups in Silicon Valley and New York City showed 87 founders, of which only three were women (Kocialski, n.d.).

There has been some research on entrepreneurial birth order. Some studies have

found that high-tech entrepreneurs tend to be first-born children (Dvir & Pines, 2007). Kaplan's (2007) study of high-tech entrepreneurs found that 71% of the sample were first-born children. It was also found that many of the 29% who were not first-born children described themselves as "the child that the parents were counting on, a state of mind that could be called being first born psychologically" (Kaplan, 2007, p. 164). High-tech entrepreneurs usually have a high need for achievement, are dominant, and responsible. These characteristics may come from being the first-born and having parents who expected them to help and take on additional responsibilities when the other children were born.

Family Background Variables

There has been some research on the influence of having entrepreneurial parents on the career paths of entrepreneurs. Having a role model who is an entrepreneur may lead to the child pursuing entrepreneurship (Eccles, 1993; Aldrich & Kim, 2007; Uusitalo, 2001). Children may learn a large amount of information about starting and running their own business from having a parent who is an entrepreneur (Hundley, 2006; Lentz & Laband, 1989). Some families have a tradition of entrepreneurship such as the Nordstrom family. John Nordstrom started a shoe store in 1902. Eventually his grandsons "took the company public as one of the most successful and admired clothing and shoe stores anywhere" (Schweikart & Doti, 2009, p. 19).

For entrepreneurs with entrepreneurial parents, the success of their parents' ventures was positively related to them becoming an entrepreneur (Ayogyam, 2012). A study of female entrepreneurs in Turkey found the majority had entrepreneurial parents and that the fathers had a higher rate of being entrepreneurs than the mothers (Boz & Ergeneli, 2013). Schoon and Duckworth (2012) found that men with fathers who were entrepreneurs were more likely to become entrepreneurs than women.

Some research has examined the influence of an absent father on the choice of career. An absent father could mean having a father who was not present or involved in their life, who was never home, or was perceived as being missing or weak, or having no father figure in their life. Kaplan's (2007) research found that 59.5% of his sample of high-tech entrepreneurs reported a missing father of some type. Research and psychoanalytic theory have proposed that entrepreneurs may channel an absent father into creativity and thinking outside of the box (Dvir & Pines, 2007; Kets de Vries, 1996; Pines, 2003; Pines et. al., 2002). It is also believed that an absent father may lead to non-conformist activities and rebellion when dealing with authority. An absent father may create feelings of insecurity and low self-esteem. In an attempt to overcome these feeling, entrepreneurs may become high-achievers.

Some career research has examined the influence of an unsupportive mother on the choice of a career. Psychoanalytic theory has found that entrepreneurs reported their mothers to have been controlling, domineering, and unsupportive in their childhood (Dvir & Pines, 2007; Kets de Vries, 1996; Pines, 2003; Pines et al., 2002). Kaplan (2007) found that high-tech entrepreneurs rated their mothers as unsupportive, but indicated that their mother also controlled their stable households and pushed them to excel at school. This type of support may help entrepreneurs to feel they are competent and believe they have the ability to accomplish what they set out to do. This may

lead entrepreneurs to surround themselves with people who believe in them and are devoted to helping them achieve their dreams.

Work and Non-Work Experiences

Economists have often studied the rate of return from education (James & Alsalam, 1993; Larkins, 2001; Psacharopoulos, 1985; Sicherman, 1991). Economists argue that the labor market will reward the human capital investments individuals make in themselves with higher salaries and more promotions (Becker, 1964). Research on labor economics and careers has indicated that the returns from educational attainment in terms of pay, promotions, job satisfaction, and achievement of personal goals are significant (Baruch & Leeming, 2001; Judge et al., 1995; Psacharopoulos, 1985). In past studies, the positive effects of education have been attributed to factors such as quantity or years of education, quality of the educational institution attended, or subjects studied (Black & Smith, 2004; Hurley-Hanson et al., 2005).

Education is often used to illustrate the investments individuals make in themselves. Early organizational studies often looked at leaders and compared where they went to college. For example, Pierson (1969) studied leaders found in the Dictionary of American Biography and found a small number of schools had produced a large number of these leaders. Useem and Karabel (1986) studied top managers from 208 large U.S. corporations and found it was important to have a Bachelor's Degree from a top ranked college or a Master's Degree in Business in order to move into top corporate management. In fact, by the 1990s, almost 60% of CEOs had Master's Degrees in Business Administration (MBA) (Black & Smith, 2004). Most studies have found that education has a positive effect on entrepreneurship (Bruderl, Preisendorfer, & Ziegler, 1992; Gimeno et al., 1997; Holmes & Schmitz, 1996; Rees & Shah, 1986) and firm survival (Cooper, Javier Gimeno-Gascon, & Woo, 1994).

The influence of the age at which an entrepreneur holds their first job is an area deserving of further research. Popular anecdotal evidence suggests that many entrepreneurs enter the work force at an early age. These findings need to be corroborated with empirical research. Similarly, very little is known about the age at which an entrepreneur holds their first job in a high-tech company. While it is known that in their early careers Steve Jobs did coding work and that Steve Wozniak worked for Hewlett Packard, researchers have not examined the influence of early career experiences on high-tech entrepreneurs.

The industry experience of an entrepreneur may influence their success. Not unexpectedly, it has been found that having previous work experience in the industry in which a person started their firm had a positive effect on the success of a venture (Cressy, 1996; Bruderl et al., 1992; Cooper et al., 1994). It has also been found that when serial entrepreneurs create their next venture in the same industry as their previous start-up, it increases their probability of success (Gimeno et al., 1997; Plehn-Dujowich, 2009; Eggers & Song, 2015). In contrast, Sir Richard Branson and Elon Musk are two famous examples of entrepreneurs who change industries frequently and encountered much success. Richard Branson is a well-known serial entrepreneur who started successful ventures in different industries. In 1970, Branson founded Virgin Records, a discount record store in London. In 1972, he started a record label, and in 1984, he entered a completely different industry and started Virgin Atlantic Airways.

He has continued to create firms in many different industries (Parker, 2014). Elon Musk has also had start-ups in many different industries. He started PayPal to make digital payments possible. He then began manufacturing Tesla electric cars, and more recently started SpaceX, a venture in space exploration.

Some research has examined the role of failure on later success. Failures may provide information and knowledge for the entrepreneur which helps them to improve the performance of their subsequent ventures (Eggers & Song, 2015). Serial entrepreneurs have been found to perform better if they learn from their past venture experiences (Parker, 2013). Other studies have found that there are many factors that may influence whether the serial entrepreneur's performance improves after a failure. These factors include industry changes (Eesley & Roberts, 2012), number of ventures (Toft-Kehler, Wennberg, & Kim, 2014), time between startups (Parker, 2013), and entrepreneurial attribution for failure cause (Eggers & Song, 2015).

One unexplored set of variables which might influence the career paths of high-tech entrepreneurs is the category of other notable work and non-work experiences. Experiences which might be included in this category are international travel (e.g., Jobs' trip to India as a young man), hobbies and clubs (e.g., Wozniak's participation in the Homebrew Computer club), enrolling in certain college classes (e.g., Jobs' auditing a calligraphy class), dropping out of high school or college, and a variety of other notable work and non-work experiences that can shape an entrepreneur's career path and exert strong influences on their career decisions and career success.

Our study of high-tech entrepreneurs focused on the demographics, family background, and work and non-work experiences described above (Hurley-Hanson & Giannantonio, 2015). The demographic profile of the high-tech entrepreneurs in the study found the current average age of the high-tech entrepreneurs in the sample was 47.8, with only 10% of the sample being first-born children. There were no women high-tech entrepreneurs in the sample. The family background variables of the high-tech entrepreneurs revealed that nearly 31% of the sample had parents who were entrepreneurs. Absent fathers were found in 33% of the sample, and unsupportive mothers were found in 20% of the sample. The work and non-work experiences of the high-tech entrepreneurs revealed that almost all had some college experience, averaging 3.5 years. Virtually all of the entrepreneurs spent the majority of their career in the high-tech industry. About 56% of the sample had early start-up failures. A few examples of well-known entrepreneurs in the sample who had early failures included Richard Branson, Bill Gates, and Elon Musk. These three entrepreneurs all had their first venture fail. Mark Zuckerberg had two failures before Facebook (Digital Synopsis, 2015). Only 28% of the sample had managerial experience before they started their first high-tech firm. The average age they started their first firm was 24.5 years and the average age they started their first high-tech firm was 29.3 years.

Entrepreneurial Careers

The second question addressed in this paper, "Is there an entrepreneurial life pattern?" focused on the careers of entrepreneurs. Despite the growing research literature on entrepreneurship and the voluminous popular press on entrepreneurs,

there is limited research that has examined the careers of high-tech entrepreneurs. Traditional models of careers with their emphasis on progression through a series of defined career stages may not reflect the unique career trajectories of high-tech entrepreneurs. We developed a model of high-tech entrepreneurial careers and used the career path of Steve Jobs to illustrate the entrepreneurial activities that comprise the components of the model (Hurley-Hanson, Giannantonio, & Sudek, 2013).

Steve Jobs' life story and career path offer entrepreneurship scholars a modern day case study in which to explore high-tech careers. Few entrepreneurs have captured the world's attention as Steve Jobs did. His early career success, dramatic ouster from the company he built, and ultimate transformation of Apple into one of America's largest multibillion dollar companies encapsulates the American dream. There is great interest in Jobs' life story with sales of Isaacson's (2011) biography reaching over 379,000 in its first week of publication.

Traditional stage models of careers do not appear to fit the career paths that Jobs, Gates, Zuckerberg, and other high-tech entrepreneurs have followed because those models do not recognize that individuals may cycle through stages more than one time in their careers. Unlike traditional career models which have a linear progression, our model recognizes that some entrepreneurs (e.g., serial entrepreneurs), start different businesses which results in them cycling through the stages multiple times. There are five stages in the model: early influences, reconnection, transformation, reflection, and death.

The first stage of our model of high-tech entrepreneurial careers is *Early Influences* which includes demographic characteristics, family background variables, and work and non-work experiences. In examining the early influences that shaped Steve Jobs, variables that have been noted as influencing his career path include the impact of being an only child, having a father who was a master craftsman, taking a course in calligraphy, experiencing spectacular success and a very public failure at a young age, and membership in the Homebrew computer club (Isaacson, 2011).

The second stage in the career model is *Reconnection*. One life pattern that can be observed in the careers of some high-tech entrepreneurs is a return to one of the first companies that they founded. In some cases, the reconnection to their previous company came after a very dramatic and public ouster. For example, in 1985 Jobs was forced out of Apple, but returned in 1997 when the company purchased NeXT, the computer firm he started after his ouster from Apple. The Apple he returned to was a dying enterprise. Fourteen years later, at the time of his death, it had become the most valuable company in the United States. When Jobs returned to Apple he reconnected it to its true purpose, innovation. Jobs used Apple's organizational identity to build the company into one of the top firms in the country. Other examples of high-tech entrepreneurs who experienced the reconnection stage are Sir Terry Matthews who left Mitel in 1985 and acquired it back in 2000; Larry Page who co-founded and was CEO of Google from 1998-2001, and who returned as CEO in 2011; Jack Dorsey, the CEO of Twitter, who became Chairman in 2008, and returned to Twitter as Executive Chairman in 2011.

The third stage in the model is the *Transformation* stage. In this stage, the entrepreneur transforms the company from following its current strategic path to taking

the company in a new direction. For example, one of the keys to Jobs' success was his transformation of Apple from a computer company to a mobile device company. When Jobs introduced the iPad in his January 2010 Keynote, he formally announced that Apple was a mobile devices company (CircleID Reporter, 2010). This shift in strategy and redefinition of the company's mission was a dramatic transformation for a company that had launched the personal and home computer industry. Jobs transformed additional companies, as well as entire industries. He transformed Pixar from a computer division of Lucasfilm into an award winning computer animation film studio. He transformed the way that music was purchased, stored, and listened to through the development of iTunes and the iPod. He transformed software development and distribution with the creation of the App store, creating a cottage industry for thousands of app developers, and launching another generation of high-tech entrepreneurs. Another example of an entrepreneur who transformed his company was Michael Dell who transformed the way computers were sold by eliminating the middle man.

The fourth stage in the model is the *Reflection* stage. This stage may be triggered by thoughts of retirement, confronting a major health crisis, a desire to make a difference in the world, or an assessment of one's career successes and failures. The philanthropic work of Bill and Melinda Gates and Mark Zuckerberg and Priscilla Chan are examples of entrepreneurs in the reflection stage. In the case of Steve Jobs, his cancer diagnosis appeared to begin the reflection stage of his career. He began to speak to the media about his career and personal life. He chose to speak at graduations and other venues where he hoped to have an impact on people's lives and careers. He also agreed to have a biography written about him (Issacson, 2011). He opened up about career failures as well as successes in the hope of imparting wisdom that would help people to succeed.

In the reflection stage, Jobs appeared to consider his generativity needs (Erikson, 1963). In his personal life, he spent private time with his wife and children as well as his friends and colleagues. Jobs prepared Tim Cook for the day when he would no longer be able to run Apple because of his health. He worked very closely with Apple's board to prepare the company for life at Apple after he was gone. Steve Jobs worked to make sure the company would survive without him. He focused on choosing his successor and setting up the next products that Apple would introduce to the world. The three stories he told in his 2005 commencement address at Stanford were reflections on his life and legacy and lessons learned along the way.

Bill Gates is another example of an entrepreneur in the reflection stage. Not only does he talk about his need to help people in the world, he has donated a significant portion of his wealth to doing so. He has joined other wealthy people including Mark Zuckerberg and Warren Buffett who have taken The Giving Pledge which is a commitment to dedicate the majority of their wealth to philanthropy. Some high-tech entrepreneurs such as Lord Sugar and N.R. Narayana Murthy have written autobiographies or collaborated on biographies to help spread what they have learned in their careers in an effort to help others, suggesting that they too have experienced the reflection stage.

The fifth and final stage of the model is *Death*. Companies with strong entrepreneurial founders have to consider the impact that the death or exit of their company's founder will have on the long term viability of their firm. Steve Jobs faced the fifth stage of the

model by resigning from his duties as CEO of Apple and preparing for his death from pancreatic cancer. He died on October 6, 2011 at the age of 56. His death sparked very unique public reactions throughout the world. In the days following Jobs' passing, reflections on his legacy were noted by the worldwide media. BusinessWeek devoted an entire issue to him, something they had never done in their publishing history. Apple users around the world felt the need to note the passing of Steve Jobs. Apple stores allowed visitors to place Post-it notes around the store sharing their feelings on the loss of Steve Jobs. People were able to use Apple technology to create visual images to send around the world to mourn with other Apple customers and fans of Steve Jobs. This type of visual data may provide an important way for stories about the life of an organization and its founder to be remembered. On the one-year anniversary of his death, visitors to the Apple website were presented with a picture of Steve Jobs followed by a voice over video by Tim Cook. This visual image demonstrated a company mourning the loss of their founder and paying respect to him.

Another issue to consider in the death stage of entrepreneurial careers is the reaction of the financial markets. While the impact of losing the company's founder may be keenly felt and result in questions about the long term viability of all firms, these concerns may be more pronounced in entrepreneurial firms. Because of his inextricable relationship with Apple, questions were rampant about whether his death would also result in the demise of Apple. There have been many product launches since the death of Steve Jobs. Although most have been highly anticipated and have generated huge sales numbers, even a tiny slip from the top spot as the world's most valuable company leaves investors leery of Apple's long term viability and continued success. Although in reality this may have nothing to do with the death of Steve Jobs, many will attribute financial decline to the absence of Jobs.

Conclusion

This paper explored the two questions proposed by Schweikart and Doti in their book, *American Entrepreneur* (2009), by examining the characteristics and careers of high-tech entrepreneurs. In answer to the first question, "Is there an entrepreneurial character?", three findings stood out in our study (Hurley-Hanson & Giannantonio, 2015). First, in contrast to the young high-tech entrepreneurs highlighted in today's popular press and idolized by millennials, the average age of the high-tech entrepreneurs in our study was 47.8. The average age at which they started their first company was 24.5, and the average age they started their first high-tech firm was 29.3.

The highly publicized success stories of very young, very rich high-tech entrepreneurs may be contributing to the formation of entrepreneurial image norms. These image norms may be influencing millennials' entrepreneurial intentions. An image norm is the belief that individuals must present or possess a certain image, consistent with occupational, organizational, or industry standards, in order to achieve career success (Giannantonio & Hurley-Hanson, 2006). It has been noted that Steve Jobs' image when he was in his twenties did not fit the image norm of an entrepreneur. Jobs famously created his own unique image which consisted of a plain black turtleneck and a pair of faded blue jeans (Issacson, 2011). Jobs was an excellent example of an

image buster, a person who was so skilled and successful at their work that they were able to publicly and professionally present themselves with no concern for societal expectations regarding their appearance (Giannantonio & Hurley-Hanson, 2006).

Second, 56% of the high-tech entrepreneurs in our sample experienced early failures. A similar finding was noted by Schweikart and Doti (2009) in their book. They found that “American innovators and industrialists, inventors and business people have the capacity to come back yet again... Many entrepreneurs declared bankruptcy—some two or three times...” (Schweikart & Doti 2009, p. 8). They also found that “some of America’s greatest success stories resulted from abject failure. Automaker Henry Ford, banker A. P. Giannini, and department store founder Sam Walton all declared bankruptcy, had their first enterprises fail miserably, or were unceremoniously kicked out of companies they created before they attained ultimate success” (Schweikart & Doti, 2009, p. 13).

Third, the high-tech entrepreneurs in our sample came from many different backgrounds. This finding is consistent with Schweikart and Doti’s (2009) findings.

Many entrepreneurs grew up impoverished. Andrew Carnegie went from a “bobbin boy,” a child laborer in a textile mill, to one of the richest men to ever live in the United States. By contrast, J. P. Morgan sampled all the luxuries of his era in his youth, and his successful father arranged for his first job. He, too, amassed one of the largest fortunes in U.S. history (p. 8).

Schweikart and Doti (2009) also commented that “entrepreneurs come from all walks of life and backgrounds — from Harvard MBAs to penniless immigrants” (p. 8).

In answer to the second question, “Is there an entrepreneurial life pattern?” future research will be necessary to determine if our model of high-tech entrepreneurial careers is representative of the different categories of entrepreneurs identified in the management literature. Similarly, it is too soon to decipher if the life and career of Steve Jobs represents all high-tech entrepreneurs. What is clear from examining Steve Jobs’ career path and life pattern is that entrepreneurs need to plan for how their firms will survive once they are gone. Schweikart and Doti (2009) highlighted the importance of this, suggesting that in order for businesses to grow to the next level, they have “to operate beyond the constant input of a single individual on matters of detail”. They referred to moving “outside the personal, daily control of the founder” as the “Walton zone”, based on the story of Sam Walton (Schweikart & Doti, 2009, p. 456).

Schweikart and Doti’s (2009) book provided the underlying context for the research presented in this paper. Examining the characteristics of high-tech entrepreneurs has allowed us to look at the demographic, family background, and work and non-work variables that may characterize high-tech entrepreneurs. The model of high-tech entrepreneurial careers presented in this paper has allowed us to challenge the assumptions of career theories and expand our understanding of the life patterns of high-tech American entrepreneurs.

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Lynne Pierson Doti's Intellectual Contributions to the Fields of Economic and Business History

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In this short essay I will provide a brief overview of Lynne Doti's research and explain why it has been, and will continue to be, important for the fields of business and economic history. I will start by discussing Lynne's research in banking before moving on to her research in real-estate finance. The essay will then contain two short sections on Lynne's work on entrepreneurship and the California Missions before concluding.

I was honored to be asked by officials from Chapman University to write an article about Lynne Doti's research for this Festschrift volume. Lynne is an outstanding economic historian whose work, stretching over four decades, has provided keen insights into the subject matter she has studied. Lynne is a specialist in banking and financial history and has written extensively in these areas. She is the author of a number of academic journal articles, but, unlike most academic economists who limit themselves to such publications, she has also written several books. Lynne's decision (and ability) to write these books likely stems from her position as an economic historian. By this, I mean that her knowledge of the subject matter she engages enables her to support her narrative analysis without the overuse of cliometric analysis that is sometimes used as a crutch by other economic historians in their work. These lengthier contributions have allowed Lynne to explore her chosen topics in great detail and will likely prove to be the centerpieces of her academic legacy.

Banking History

Lynne's research has generally focused on the history of banking and real estate finance. She is especially associated with the specific research area of California's banking history and her work on this topic has established her as an expert (arguably, "the" expert) on the subject. Lynne's first major work in this area began at the University of California, Riverside in the late 1970s when she wrote her doctoral dissertation. Since then, she has revisited the topic many times culminating in several books and

numerous articles on the subject. In the paragraphs below, I selectively highlight some of this research.

In her dissertation, *Banking in California: Some Evidence on Structure 1878-1905*, Lynne studied bank-level data to examine capital mobility in California to determine if actual empirical evidence supported two of the existing major hypotheses about American financial history. Lynne found that California's financial system did not show evidence of significantly increased market integration during the last part of the 19th century, primarily because California's financial system had already been well-integrated by the late 1870s. This finding ran counter to Lance Davis' well-known thesis that financial markets became increasingly integrated during this period as barriers to inter-regional flows of capital decreased (Davis, 1965). Lynne's research also challenged Richard Sylla's argument that regulatory capital requirements resulted in a two-tiered banking system in which the banking industry in urban areas was competitive while it was characterized by less competition and local monopolies in rural areas (Sylla, 1969). Lynne found little evidence that rural banking was typified by monopolies, casting doubt on the Sylla hypothesis. As a testament to the quality of this research, portions of Lynne's dissertation were published in an article in *Essays in Economic and Business History* in 1981. Then in 1995, an updated and revised version of the dissertation was published as *Banking in an Unregulated Environment: California 1879-1905* and then republished in 2014 by Routledge Press.

One specific theme that Lynne explored early in her career and revisited several times in her research is that of branch-banking. Unique among developed nations, the United States imposed restrictions on the ability of banks to open branches until the mid-1990s. These restrictions existed at the national level preventing banks from operating inter-state branches. Most states had similar restrictions as well that limited the operation of intra-state branching networks. In fact, in a number of states branching prohibitions forced banks to be composed as a single-location "unit" bank. As Lynne described in various publications, including her 1984 article "Banking in California: The First Branching Era," California had some of the most lenient (and sometimes even non-existent) branching restrictions in the country. In a number of her publications, Lynne showed how California's relaxed regulatory environment with respect to branching benefited the California banking system.

In 1991, Lynne published the article "Nationwide Branching: Some Lessons from California" in which she extrapolated from California's experiences with a statewide branching system to its potential application nationwide. Lynne's paper predicted that if bank-branching was to be permitted across the United States, that smaller unit banks would likely be acquired by larger banks, but that there would likely not be a large reduction in competition in the banking industry. A test of Lynne's hypotheses was made possible shortly thereafter when the United States passed the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. As Lynne predicted, there did indeed follow a large merger movement in the banking industry. Evidence also exists to suggest that nationwide banking has not resulted in a less competitive banking sector (e.g., Giedeman, 2004).

In a paper that evaluated other banking regulations, Lynne Doti and Richard Runyon examined the transition of California's banking system from basically that of a

free-banking system to one that was more traditionally regulated with the imposition of reserve and capital requirements. Their 1996 article “The Effect of Regulation on Banking: California 1879-1929” found that increased regulation did not seem to result in greater stability for individual banks, but did seem to result in greater stability for the banking system as a whole.

The first of Lynne’s major books was published in 1991. Written with historian Larry Schweikart, *Banking in the American West: From the Gold Rush to Deregulation* examined the banking systems of the states west of those bordering the Mississippi River (with the notable exception of Texas). The book was received with a great bit of interest, garnering numerous reviews in both academic journals and popular media. One quarter of a century after it was published, it still remains relevant for scholars of western American banking. The book’s overall theme is that state banking systems function better when not overly encumbered by government regulations, especially those that limited banks’ ability to operate branch-banking networks. Although some modern researchers might wish for more statistical analysis to accompany the narrative text, the liveliness of the writing style is still appreciated. Also remaining very much appreciated are the more than four dozen pages of reference notes which provide extensive documentation and direction to source materials.

Following up on *Banking in the American West*, Doti and Schweikart again collaborated to write *California Bankers, 1848-1993* which was published by Simon & Schuster in 1994. This book, supported by the California Bankers Association, was written with a general audience in mind but does have scholarly themes and references. Again, the benefits of California’s branch-banking system were highlighted as were important individuals in California’s banking history. An example illustrating both of these themes is the book’s discussion of the famed A.P. Giannini who benefitted from California’s branch-banking allowances as he founded the Bank of Italy which later became the Bank of America. While not as directly academically important as *Banking in the American West*, *California Bankers* is an interesting book to read and contains enough information for readers to begin to understand the development of banking in California.

Further serving as a testament to her expertise in the area of western banking, Lynne wrote the encyclopedia entry for *Banking in the American West* for the Economic History Association’s well-regarded *Economic and Business History Encyclopedia*. She also wrote ten entries for the Banking and Finance volumes of the *Encyclopedia of American Business History and Biography* as well as two entries concerning banking in Oklahoma for the Oklahoma Historical Society’s *Encyclopedia of Oklahoma History*. Additionally, Lynne co-authored “A Bibliography of Western Banking” for the book, *Banking in the West*.

Real Estate Financing

Related to Lynne’s work on banking history are her studies of the history of real estate financing. Her first major foray into this area examined the way that the postwar housing booms in Phoenix and Los Angeles were financed. In her 1989 paper, “Financing the Postwar Land Boom in Phoenix and Los Angeles 1945-1960,” written

with Larry Schweikart, Lynne detailed how the rapid increase in demand for housing, prompted at least in part by the growth of the defense industry, led to a demand for real estate financing that, especially in California, overwhelmed the commercial banks' ability to supply it. Savings and loan associations as well as insurance companies, which increasingly obtained funds from the east, stepped in to fill the shortfall.

More recently, Lynne has worked on a study of the entire history of real estate financing in California. A series of working papers she has written over the last half-decade have very recently culminated in her book *Financing Real Estate in California: Missions to Sub-Prime Mortgages*. The book, published by Routledge Press, only became available as I was finishing writing this article, and I have therefore not yet had a chance to read it in its entirety. I have, however, been able to read portions of the book and I additionally listened to Lynne present some of the background research upon which the book is based at several of the annual meetings of the Economic and Business History Society. As such, I feel at least partially justified in providing some discussions of this work. As the title suggests, the book is intended as a comprehensive history of real estate finance in California and it provides a captivating look at the cycle of boom and bust periods in the California real estate market. While the real-estate bubble of the 2000s, its bursting, and the subsequent financial crisis are given significant emphasis in the book, I personally found the chapters on earlier boom-and-bust events perhaps even more interesting. Readers of the book will be treated to a roller-coaster ride along the real-estate cycle from gold booms, to oil booms, agricultural booms, defense industry booms, etc. – all with their subsequent busts (or at least slowing of the growth pattern). Throughout the book, Lynne infused her discussion of the larger trends with fascinating accounts of individual persons and places, providing interesting context for the overall exposition. Because few other places, if any, have experienced a denser or more remarkable history of modern real-estate development than California, any book on the topic would likely be of interest to readers. Thankfully though, Lynne has not written just any book, but has instead produced a splendid piece of scholarship on the subject.

Entrepreneurship and California Missions

In addition to all of her work on banking and financing, Lynne also produced, along with her long-time co-author Larry Schweikart, the book, *American Entrepreneur: The Fascinating Stories of the People Who Defined Business in the United States*. Building on previous work by Schweikart, this 500+ page tome presents an overview of the history of entrepreneurship in America from the early 17th century to the 21st century. While the book does highlight many individual entrepreneurs, defining such persons as those who take “the risk to create material wealth in the economic realm” (p. 9), it also weaves together entrepreneurship with the strands of politics and general economics. While Doti and Schweikart's interpretation of these latter threads has not gone without some controversy, the book has become standard material for readers desiring a look into the heart of American business entrepreneurship. In addition to its appeal to general audiences, *American Entrepreneur* has become required reading for students in business school courses across the country and has been translated into

multiple languages.

For her most current work, Lynne has begun conducting an economic analysis of the Spanish Missions in California. The missions, though important to California's development, have been little studied by economic historians as of yet. Lynne has begun work to rectify this seeming oversight. In her 2016 working paper "Why Did They Stay? The Economics of Spanish California Missions," co-authored with Olga Zoria, Lynne addresses the question of why some Native Californians gave up their relative freedoms to join and remain at the missions with the strict working conditions and restrictive lifestyles they entailed. Doti and Zoria suggest that many Native Californians did so because the missions reliably provided them with the basic necessities of life (food, clothing, shelter, and protection). It must be noted that these conclusions are still tentative and warrant further investigation. As such, while this writer does not want to put undue pressure on Lynne as she enters retirement from one portion of her academic life, he does hope (and expect) that Lynne will continue her research in this area with the possibility of another published book as the eventual outcome.

Conclusion

This short introduction to Lynne's research can in no way do justice to her work, but I hope it inspires readers to engage Lynne's publications. Persons who do so, and not just those in academia, will find themselves rewarded with a wealth of information cultivated by Lynne's critical analysis. Furthermore, her writing style is approachable and does not suffer from the dryness often associated with academic work, making the reading of her works a pleasant endeavor. In summary, Lynne Doti has produced some wonderful pieces of scholarship over her career. Her research legacy will be long-lasting, especially in the fields of the economic history of Californian banking and real-estate finance. Her works in these areas will remain for a long time the authoritative sources on the subjects.

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Appendix: Selected Publications of Lynne P. Doti by Category

BANKING:

- “Banking in Orange County: Early Years.” *Orange Countiana Vol. II: Orange County Historical Society*, 1980.
- “Banking in California 1878-1905: Some Evidence on Structure.” *Essays in Economic and Business History*, 1981.
- “Banking in California: The First Branching Era.” *Journal of the West*, XXII, No. 2, 1984.
- Banking in the American West*, with Larry Schweikart, University of Oklahoma Press, 1991.
- “Nationwide Branching: Some Lessons from California.” *Essays in Economic and Business History*, 1991.
- California Bankers*, with Larry Schweikart. Simon and Schuster, 1994.
- “The Effect of Regulation on California Banking: 1878-1929,” with Richard Runyon. *Essays in Economic and Business History*, 1996.
- “California Banking in the Gold Rush Economy,” with Larry Schweikart. In *California History: A Golden State: the Economic History of California in the Gold Rush*, Berkeley, CA: California Historical Society, 1999.
- Banking in an Unregulated Environment: California 1879-1905*. Part of Series “Banking and Finance” Abingdfon, U.K.: Routledge, 2014. Previously published: New York and London: Garland, 1995.

REAL ESTATE FINANCING:

- “Financing the Postwar Land Boom in Phoenix and Los Angeles 1945-1960,” with Larry Schweikart. *Pacific Historical Review*, 1989.
- Financing Real Estate in California: Missions to Sub-Prime Mortgages. A history of real estate boom and bust cycles in California and the role of banks and other financial institutions*. London: Routledge, 2016.

ENTREPRENEURSHIP:

- American Entrepreneur*, with Larry Schweikart. New York: AMACOM, 2009.

CALIFORNIA MISSIONS:

- “Why Did They Stay? The Economics of Spanish California Missions,” with Olga Zoria. Presented at the Economic and Business History Society Annual Meeting, 2016.

Capital Requirements and Financial Markets in California During the 20th Century

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*Lynne Doti emphasizes the use of historical banking data to study banking structure and performance and economic development. In her book, *Banking in an Unregulated Environment: California, 1878-1905*, the role of national capital requirements as a barrier to entry is revisited. Previous studies focusing on national banks find that rural bankers operate as a price discriminating monopolist. However, by 1900 over half of the banks in the United States were state banks. Doti includes state banks in the analysis and finds that they could have met the high national capital requirements and that there is not a significant difference in interest rates between rural and urban areas. Following Doti's example, bank and town level data is gathered for California to explore the impact of capital requirements on banking markets one year after state regulators began implementing capital requirements. The data suggest capital requirements do not alter the composition of capital in banking markets during this time period. The majority of state banks still hold capital levels similar to national banks even when they are subject to lower capital requirements.*

A key theme in Lynne Doti's work is the study of financial history to gain a better understanding of how financial institutions operate and the role they have in economic development. In *Banking in an Unregulated Environment: California, 1878-1905*, historical data was gathered on financial institutions and markets, in particular commercial banking data, to study issues in late 19th century banking theory and development. Prior studies focused on analyzing national bank data during this time period. However, by 1900 more than half of the banks in the United States (U.S.) were established as state banks rather than national. The inclusion of state and private banks in California improved the accuracy of previous results on financial institutions and development.

For example, Doti showed that state banks would have been able to meet the minimum capital requirements required to be established as national banks (from

this point on, minimum capital requirements will be stated as capital requirements which require banks to hold a minimum amount of capital in order to organize). Scholars argued that national bank capital requirements were a barrier to entry which resulted in country banks with monopoly power in rural areas of the United States (Sylla, 1963). However, Doti showed that California state banks held similar levels of capital and that these national capital requirements may not have been a barrier to entry in rural areas. In addition, interest rates in urban and rural areas were not statistically different. National banks operating in rural areas may not have had monopoly power in California since state banks operate alongside national banks with similar levels of capital (Doti, 1978, 1995).

Following Doti's example, this study explores the impact of capital requirements on banking markets after the California Board of Bank Commissioners began implementing capital requirements on state banks in 1909. In the early 20th century, national banks were subject to minimum capital requirements. They were also required to hold a minimum amount of capital determined by the population of the town a bank was operating in. The intuition is that a town's population represents a measure for a town's business activity and the larger a town's business activity the more capital a bank should hold as a buffer for negative economic shocks (White, 1983). However, the minimum amount of capital required doubles at specific population thresholds. For example, national banks are required to hold at least \$25,000 worth of capital if they are operating in a town with a population of less than 3,000, and the requirement doubles to \$50,000 for banks operating in towns with a population greater than 3,000. Prior to 1900, capital requirements were \$50,000 for national banks operating in town populations below 6,000. The Gold Standard Act of 1900 halved the minimum capital required for banks operating in towns with a population less than 3,000 from \$50,000 to \$25,000 as a response to state bank regulation setting their capital requirements consistently lower than national capital requirements (White, 2009).

The California Board of Bank Commissioners also implemented capital requirements on state banks that doubled at specific population thresholds. However, state capital requirements were lower than national capital requirements. For example, state banks operating in towns with populations between 3,000 and 6,000 were subject to half the capital required of national banks. However, state and national banks operating in towns with a population below 3,000 were subject to the same capital requirement of \$25,000. These differences in state and national capital requirements at specific population thresholds allowed me to estimate the effect of capital requirements on banking markets at the town-level. The main identifying assumption was that towns very close to these population thresholds should be similar in business activity and other town characteristics. The only difference was that towns with a population slightly above and below a population threshold were subject to different state and national capital requirements. Specifically, I gathered detailed bank and town level data and exploited these abrupt changes in capital requirements using a sharp regression discontinuity designed to estimate the effect of higher capital requirements on bank capital, number of banks, bank size, and state to total bank capital ratios at the town level (Hahn, Todd, & van der Klaauw, 2001; Lee & Lemieux, 2010).

To summarize, I found that towns with higher national capital relative to state capital requirements did not have significant differences in the amount of capital available, number of banks, or the average size of their banks. Higher capital requirements did not restrict entry or result in towns with larger banks in terms of capital. In addition, the composition of state and national banks was similar in towns slightly above and below a population threshold. These results suggested state banks held enough capital to meet the national requirements during the early 20th century in rural areas of California.

This study contributed to the understanding of capital requirements as a barrier to entry in financial markets during the early 20th century. Previous studies showed that national banks in rural areas of the U.S. did have monopoly power relative to banks operating in urban areas due to high capital requirements (Sylla, 1963). Doti showed that by 1889 over 55% of state banks held could have met the \$50,000 minimum capital required of state banks. I further extended this literature by testing whether this finding still holds when California began implementing state capital requirements in 1909 (Doti, 1995). I found that state banks still hold levels of capital similar to national banks in 1909 after California Bank regulators began implementing capital requirements.

The rest of this essay will analyze the impact of capital requirements on banking markets during the early 20th century in California.

Literature Review

A vast amount of quantitative work has been devoted to studying the effect of capital requirements in the late 19th century United States. Sylla (1963) argued that capital requirements were an effective barrier to entry and supported his claim by providing evidence of a rapid increase in the establishment of national banks when these capital requirements were lowered in 1900. Prior to 1900, capital requirements allowed rural bankers to operate as price discriminating monopolists, charging higher interest rates in rural areas. Other scholars found results that did not support Sylla's findings. James (1976) argued that while the number of national banks did increase after 1900, the number of state banks also increased and some national banks were converted to state banks. James (1976) also found that interest rates were more correlated with a state's capital requirement and that including a state's capital requirement may complicate Sylla's (1963) analysis.

Sylla's work was extended by using information on all financial institutions operating within the state of Wisconsin including national banks, state banks, and private banks. Keehn (1974) used Sylla's technique to determine whether capital requirements were an effective barrier to entry for the state of Wisconsin. He found that most counties had a high level of bank density. In addition, Keehn found that the counties with low bank density attributed this to low demand, not capital requirements restricting entry (Keehn, 1974). Doti gathered information on all financial institutions for the state of California and used Sylla's techniques to determine whether national bank capital requirements were effective barriers to entry in rural areas. Doti found that most state banks could have met the national capital requirements and that interest rates charged by banks were not significantly higher in rural areas (Doti, 1978, 1995).

This study contributed to the literature by utilizing the structure of the California and national banking system to analyze the impact of capital requirements on banking markets; specifically, capital, banks per town, bank size, and bank composition at the town level. Detailed information on towns and state and national banks allowed me to observe how different state and national capital requirements influence a town's banking market structure. The next section provides a background of these capital requirements.

Background of Minimum Capital Requirements

Capital requirements are a fundamental regulation designed to promote financial stability. They were intended to provide a minimum level of security for depositors in case of a negative economic shock (White, 1983). These laws required banks to hold a minimum amount of capital according to the size of their town's population. Town population was a crude measure of the volume of business activity in a town. The larger the volume of business activity, the greater the minimum amount of capital required to offset the losses that could occur from borrowers defaulting on their loans. However, the minimum amount of capital required for banks to hold was not graded continuously by town population. Instead, the minimum amount of capital required by banks to operate doubled at each specific population thresholds.

Table 1 describes these national and state capital requirements for the year 1909. Row 1 illustrates the national capital requirements. At specific population thresholds, these capital requirements double in amount. For example, banks operating in towns above the population threshold of 3,000 are required to hold at least \$50,000 worth of capital. However, banks operating in towns below the threshold of 3,000 are required to hold \$25,000, half the amount.

Table 1: National and State Bank Minimum Capital Requirements, 1909

	Minimum capital required to establish a bank			
	Town Population			
	Population < 3,000	3,000 ≤ Population < 6,000	6,000 ≤ Population < 25,000	25,000 ≤ Population
National	\$50,000	\$50,000	\$100,000	\$100,000
State	\$25,000	\$25,000	\$50,000	\$100,000

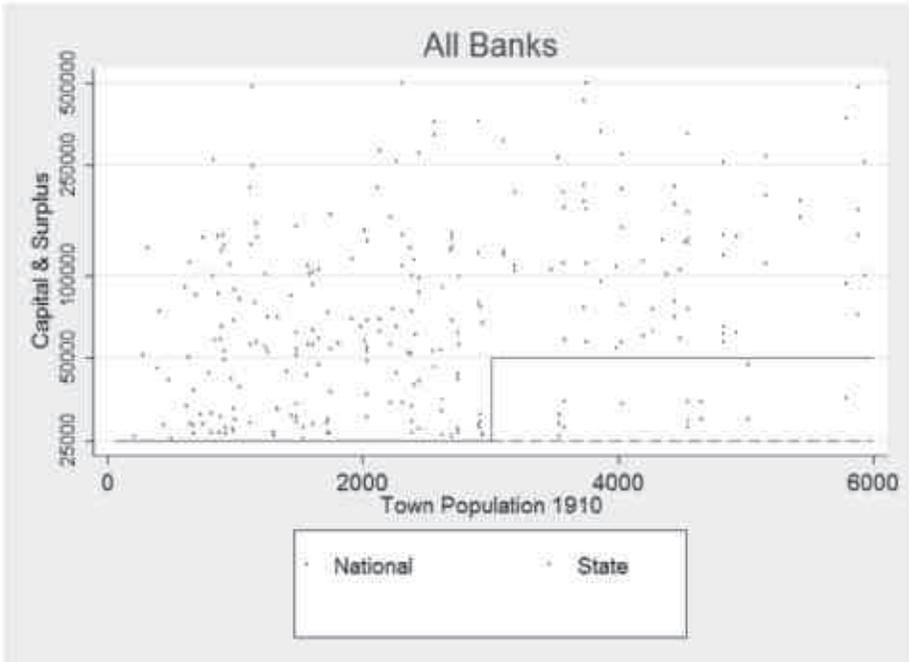
*Source: OCC Annual Reports, 1900 and 1910; White, 1983; Doti, 1973

Notes: Minimum capital required to establish a State or a National bank doubles from \$100,000 to \$200,000 for towns with a population greater than 50,000

California state banks are subject to capital requirements that are lower than national requirements. Row 2 in Table 1 illustrates the state capital requirements in California. For example, state banks are required to hold \$25,000 worth of capital operating in towns with a population below 6,000. State banks do not have to increase their capital to \$50,000 once their town population is above the 3,000 threshold. Instead, they are required to increase their capital to \$50,000 for towns above population threshold of 6,000. Figure 1 provides a visual representation of these differences in capital requirements between state and national banks for towns with a population less than 6,000. The solid line represents national requirements while the

dashed line represents state requirements. There is a discrete jump in capital required of national banks at the population threshold 3,000. However, for state banks there is no discrete jump at the population threshold of 3,000. These differences in capital requirements allowed me to compare differences in banking markets for towns slightly below and above these population thresholds.

Figure 1: Bank Capital Across Town Populations, 1910



Data Sources

Data on commercial banks was provided by *Rand McNally Banker's Directory* (1918) published biannually in January and July. These data contained information on bank characteristics including name of the bank, location of establishment, and year of establishment, bank status, correspondent relationships, and bank balance sheet information such as paid-up capital, surplus, and loans. I gathered data on all national and state banks from the July 1910 issue of *Rand McNally Banker's Directory* for the state of California and provided a total of 676 banks operating in 212 towns.

The precise location of each bank allowed the corresponding towns to be merged with another source that contained data on town population. This data source was the United States Population Census of 1910. The population census is published by the Federal government each decade and contains information on population characteristics at the national, state, county, and town level. Each town's population for the years 1910, 1900, and 1890 were provided in the population census of 1910. These town population data were gathered for every bank in the dataset. In addition, I also

included in the analysis, towns that did not have any banks. There were a total of 212 towns matched with town populations in the dataset with over 86% of towns with a population of less than 6,000. Since most of the towns in California have a population of less than 6,000, the focus of the analysis was on the lowest population threshold of 3,000.

Research Design

Capital requirements, if binding, should have an impact on a town's banking market in several ways. First, they can increase the total amount of capital in a town. Bank capital is positively correlated with town population, which is a proxy for business activity. In absence of capital requirements a positive continuous relationship may be observed between the level of capital in a town and population. However, these capital requirements may create rigid increases in capital levels for towns with populations slightly above a threshold. Town population is the key variable that determines the minimum amount of capital required for a bank. A description of national and state capital requirements is provided below:

$$\text{National Capital Requirement} = \begin{cases} \$25,000, & \text{if } Pop_i < 3,000 \\ \$50,000, & \text{if } Pop_i \geq 3,000 \end{cases}$$

$$\text{State Capital Requirement} = \begin{cases} \$25,000, & \text{if } Pop_{sta} < 6,000 \\ \$50,000, & \text{if } Pop_{sta} \geq 6,000 \end{cases}$$

The capital requirement doubles from \$25,000 to \$50,000 for national banks if a town's population crosses the threshold of 3,000, while the requirement remains at \$25,000 for state banks. An abrupt increase in capital, being driven by an increase in national requirements, may be observed for towns slightly above the population threshold of 3,000 compared to towns slightly below the threshold. Specifically, I estimated a local-linear regression where I regressed capital on town population, an indicator for crossing the population threshold, and an interaction term between town population and the indicator crossing the threshold for a given bandwidth. The bandwidth proposed was based on Calonico, Cattaneo, and Titiunik's (2014) methodology where "data-driven confidence interval estimators are constructed that exhibit close-to-correct empirical coverage and good empirical interval length on average...improving upon the alternatives available in the literature" (p. 2300). The model is described below in Equation 1:

$$\text{Capital}_i = \beta_0 + \beta_1 Pop_i + \beta_2 1(Pop_i \geq 3000)_i + \beta_3 Pop_i 1(Pop_{sta} \geq 3000)_i + Pop_i + \epsilon_i \quad (1)$$

$$Pop_i \in (3000 - k, 3000 + k)$$

where "i" represents a town in the year 1910 and the bandwidth "k" represents the bandwidth chosen for the specification.

The variable "Capital" represents the total amount of bank capital in a town for the year 1910. The population variable "Pop" represents the town population in 1910. The indicator variable $1(Pop_i > 3000)_i$ represents if a bank is operating in a town just above

the town population cut-off of 3,000, where national capital requirements increase from \$25,000 to \$50,000, but state requirements remain at \$25,000.

It is possible that capital requirements do not have an impact on the total amount of capital available in a town, but instead alter the composition of a town's banking market. These higher national capital requirements could result in towns with fewer, but larger banks in terms of capital. The second and third outcome variables estimated using Equation 1 are number of banks and mean bank size (bank size is measured as average amount of capital for a bank in a given town). Comparing differences in the number of banks allowed me to observe if there were fewer banks in a town above a population threshold due to national capital requirements. In addition, observing bank size allowed me to observe if there were fewer, but larger banks due to these requirements.

The fourth outcome variable estimated using Equation 1 was state to total capital ratio in a town. State and national capital requirements are the same for banks operating in towns below the population threshold of 3,000. National capital requirements are twice the amount of state requirements for towns above the threshold of 3,000. Differences in state to national bank capital ratios may arise if lower state requirements provided an incentive to organize as a state bank.

Results

First, I provided descriptive statistics that illustrated state banks hold capital amounts similar to national banks above and below the population threshold of 3,000. Table 2 reports the fraction of state and national banks operating with various capital levels above and below the population threshold of 3,000. The fraction of state banks holding capital between \$25,000 and \$50,000 is similar to that of national banks in towns with a population below 3,000. This is not surprising since banks are subject to the same capital requirements below the threshold. However, the composition of capital is also similar for national and state banks operating in towns above the threshold. One might expect more state banks to hold capital below \$50,000 since the state capital requirement is \$25,000. This is not the case. About 83% of state banks hold capital amounts above \$50,000, and 88% of national banks hold capital above \$50,000. There are 4 out of 32 national banks that have capital below the requirement who appear to be not treated by the capital requirement. In addition, Table 3 illustrates the fraction of state and national banks operating in towns above and below the threshold of 3,000. The composition of state and national banks are relatively similar above and below the threshold. About 67% of banks possess state charters below the threshold, while 70% of banks possess state charters above the threshold. At first glance, state and national capital requirements do not alter the composition of the town's banking market.

Table 2: Mean Level of Capital & Surplus, By Bank Category and Town Population, 1910

Percentage of Banks in each Category in the year 1910			
	Population<3,000	3,000<Population<6,000	All Towns
State & National Banks Capital<25,000	0	0	0
25,000<Capital<50,000	38	16	22
50,000<Capital	62	84	78
State Banks Capital<25,000	0	0	0
25,000<Capital<50,000	38	17	23
50,000<Capital	62	83	77
National Banks Capital<25,000	0	0	0
25,000<Capital<50,000	34	13	18
50,000<Capital	66	88	82

Source: US Population Census of 1910, Rand McNally Bankers Directory 1910

Table 3: Fraction of Banks in Operation, By Bank Category and Town Population, 1910

Percentage of Banks by each Category in the year 1910			
	Population<3,000	3,000<Population<6,000	All Towns
State	30	33	30
National	70	67	70
Total	100	100	100

Source: US Population Census of 1910, Rand McNally Bankers Directory 1910

Figure 2: Bank Market Characteristics Across Town Populations, 1910, Town Population <6,000

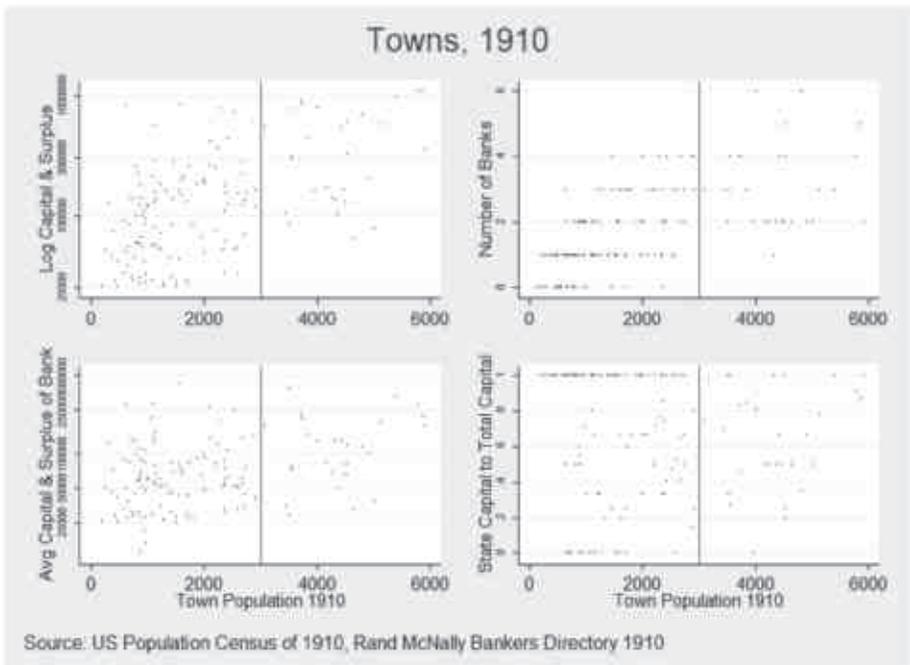


Figure 2 provides a visual representation of the relationship between town population and financial market characteristics at the town level. Each observation represents a town's population and its associated outcome variable. The vertical line illustrates where the town population is 3,000; the population threshold where the national requirement doubles from \$25,000 to \$50,000. There are a few inferences to be made from these plots. First, there are many small towns with low populations. On the contrary, there are not many banks with a population greater than the threshold of 3,000. This means that the local-linear results may be imprecise due to a lack of observations. Second, there is a positive relationship between capital and town population, but there does not appear to be a significant jump in capital at the population threshold. In addition, there is not an obvious relationship between the number of banks and town population or bank size and town population. Lastly, many of these towns have 1 or 2 banks which results in the majority of state to total capital ratios equal to unity.

Table 4 reports estimation results of higher national capital requirements on capital, number of banks, bank size, and state to total capital ratio derived from Equation 1 for the bandwidth choice of $\pm 1,000$. The bandwidth choice of $\pm 1,000$ is used since it was the most common bandwidth selected for each outcome variable using the Calonico et al. (2014) method. There is no evidence of a significant increase in capital. However, there could be larger and fewer banks due to higher capital requirements. I did not find a significant difference in the number of banks or bank size suggesting that this is not the case. Lastly, it is not surprising to find that state to total capital ratios showed no difference. This last result suggested that there were not significantly more state banks relative to national banks. Tables 1 and 2 provide evidence that state banks held capital levels similar to national banks above and below the population threshold and the regression estimates supported this finding. The findings in Table 4 suggest that state banks may not have been impacted by national capital requirements even when California began to implement capital requirements in 1909. These results support Doti's (1978) findings that most of the state banks would have been able to meet the capital requirements of the national banking system.

Table 4: Impact of Higher Minimum Capital Requirements, Bandwidth Choices Based on CCT

Dependent Variable:	Capital & Surplus	Number of Banks	Bank Size	State to Total Capital
(Pop>3000)	-0.0002 (0.0006)	0.000900 (0.000658)	-0.000586 (0.000422)	-0.0003 (0.0002)
1(Pop>3000)	0.890 (0.854)	0.460 (0.989)	0.668 (0.634)	0.407 (0.296)
(Pop>3000)*1(Pop>3000)	0.0002 (0.001)	-0.00109 (0.00153)	0.000713 (0.000983)	-0.0002 (0.0006)
Constant	11.83*** (0.345)	2.855*** (0.399)	10.85*** (0.256)	0.513*** (0.119)
Bandwidth	± 1000	± 1000	± 1000	± 1000
Observations	43	43	43	43
R-squared	0.148	0.156	0.120	0.104

Notes: Standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Town Clustered SE's, excluding 1 Town holding capital and surplus greater than 600,000. Optimal data-driven bandwidth is chosen based on Calonico, Cattaneo & Titiunik, 2014.

Conclusion

Capital requirements have been a barrier to entry for national banks in many areas for the United States prior to 1900. These higher capital requirements led to country banks behaving as price discriminating monopolists in rural areas of the U.S. However, many of these results focus on analyzing national banks. By 1900, many states had a significant fraction of state banks in operation. California is no exception. In 1909, California began to implement capital requirements graded according to town population that were more lenient relative to national requirements. I found that higher national requirements relative to state capital requirements did not result in more capital in towns. Most state banks were holding enough capital to meet the national requirements. Thus, higher national requirements did not alter the composition of state and national banks for towns with higher national relative to state capital requirements. These findings reveal that the addition of state banks improves the accuracy of studies on banking markets in California and in this case, how banks respond to capital requirements.

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Lynne Doti: Pioneer in Business and Economic History

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Legendary entrepreneur Steve Jobs once noted, “people say you have to have a lot of passion for what you’re doing and it’s totally true. And the reason is because it’s so hard that if you don’t, any rational person would give up. It’s really hard. And you have to do it over a sustained period of time” (Interview with Steve Jobs and Bill Gates, 2007).

To anyone who has closely observed Dr. Lynne Doti over the years, one thing is glaringly obvious: she has an amazing and enduring passion for her work. Less obvious is the breadth of what Lynne Doti actually does, and indeed, if she defines it as “work.” Many familiar with her fine scholarship and teaching may be unfamiliar with Doti’s numerous other contributions, such as her shepherding the growth of the Economic and Business History Society (EBHS). In her successful endeavor to help the EBHS develop into a major, well-respected academic organization, Lynne Doti has been a wise entrepreneur, exerting leadership when necessary, teaching others to take the reins, and with ceaseless energy, tackling new projects, like editing the Society’s peer-reviewed journal *Essays in Economic and Business History* (EEBH). In everything Doti does, she leaves a legacy of strength, expansion, and stability. She has helped immeasurably to grow not just the EBHS, but also the field of business and economic history. Undoubtedly, she would make a remarkable CEO of a start-up company, as she sees enormous potential in fledgling endeavors and provides concrete paths forward to achieve those ambitious visions. A lover of the history of the American West (and a major contributor to our understanding of it), Doti has the can-do spirit of the many pioneers who ventured into uncharted territories.

For Lynne Doti, one of those new territories she began exploring years ago was the EBHS. In 1975, the EBHS debuted as a small professional organization dedicated to interdisciplinary scholarship in the evolving fields of business history and economic history. At the time of EBHS’ founding, Doti was a bright young scholar who was just three years away from obtaining her Ph.D. in Economics from the University of California, Riverside. Quickly becoming one of the foremost experts in the world on banking in the American West, Doti would go on to become a dynamic force that greatly enriched the Society. In many ways, and for decades, Doti has tirelessly helped shape

the EBHS into a leading international organization, with members located throughout the United States, Europe, Canada, and Asia.

Doti exudes a passion for scholarship, not only her own, but also as a champion for others. She is richly interested in fellow members' research projects, even when their topics are far removed from her own areas of inquiry. She often perceives areas of research overlap that others have overlooked, thereby spawning intriguing interdisciplinary connections. She is an unfailingly generous scholar, willing to share her insights and with a capacity to bring people together who may have never connected if it were not for her kind intercessions. One can easily see why she excels in the classroom. Lynne Doti is deeply interested in people and helping them become their best selves. For countless scholars at the EBHS and elsewhere, Doti has provided sage advice and much-needed encouragement at various stages of their careers.

Leading through her own example, Doti also has stressed the importance of the EBHS being friendly and welcoming to everyone. Years before nation-wide discussions of "inclusiveness" and "diversity," Lynne Doti in her own effective and warm way helped provide an atmosphere that was conducive to EBHS treasuring and promoting these values. She has a particular affinity and talent for mentoring emerging scholars. Recalling their first attendance at an EBHS conference, many members relate the common experience of being initially alone and then having Doti approach them and introduce herself. Lynne would then effortlessly begin to introduce the new person to other people, discerning commonalities and building bridges. For young Ph.D.s and Ph.D. students, she would make extra effort not only to attend their presentations (often their first scholarly talk), but also to provide useful and positive feedback afterwards. If the session occurred before a lunch or dinner break, she would also unfailingly make an effort to invite them along to join a group for a meal.

Notably, in her conversations, Lynne Doti rarely ever talks about her own projects or recent string of impressive accomplishments; rather, she focuses on other people. One might not initially guess one was interacting with someone as widely published as she. Easily approachable and affable, Doti is a formidable scholar, with numerous thoughtful books and engaging articles to her credit. At the latest EBHS conference in Montreal, Doti had recently finished her book, *Financing Real Estate in California: Missions to Subprime Mortgages* (Doti, 2016), yet she spoke little of it. Nor is she likely to tell people that *American Entrepreneur*, which she co-authored (Schweikart & Doti, 2009), has been translated into multiple languages. Doti has been prolific, writing a half-dozen books and too many articles to mention, yet has remained one of the most humble, down-to-earth individuals in academia today.

In her actions, Lynne Doti is guided by a deep sense of compassion for others. Her own early experiences as one of the few women in the business history field may have helped hone that sense of empathy for young colleagues seeking to feel included and nurtured. Ed Perkins, emeritus professor at the University of Southern California and one of the original founders of the EBHS, recalled that "back in those early days, there were few women who attended the annual meetings of either the EBHS or the Business History Conference. Lynne was, in a sense, one of the pioneers. And she was a great role model for other young women with similar career aspirations." Others concur. Larry Malone, professor at Hartwick College who served as Chair of the EBHS' Board of

Trustees for many years, recalled that Lynne Doti's "presence and advocacy for women has been consistent since her earliest days." Collaborating with the Board, she worked hard to foster more women joining the organization and remaining active within it. Interestingly, in her inclusive approach, Lynne avoided treating women (or any other group) as "special" or different. Many members fondly relate how she made them feel valued as a person and as a scholar, not because of any particular attribute like gender that they possessed.

Lynne is the longest-serving trustee of the EBHS, and has served in several leadership roles. She is the only person (male or female) to have been president of the organization twice (1992-1993, 2011-2012). At critical junctures in the organization's history, she helped aim the EBHS in fruitful directions, providing judicious counsel. For example, at the Anaheim, California meeting she organized, she strongly advocated for locating the association's meetings in diverse geographical areas, including abroad. Doti possessed a vision for what the EBHS could become, and she was bold enough to articulate and help execute that plan. Today, the organization is more than four decades old, and in many ways, it is stronger and more vibrant than ever before, due to Doti's patient guidance over the years.

Lynne Doti has continually expanded her repertoire of contributions to EBHS, responding to various organizational needs as they materialized. Notably, in addition to serving as president, she edited the association's peer-reviewed journal, *Essays in Economic & Business History* for several years. In many ways, Doti's willingness to take on this large task reflects her fundamental desire to give back. Prior to assuming the editorship, Doti had been a frequent contributor to the journal. Among the articles she authored for EEBH were "Nationwide Branching: Some Lessons from California" (Doti, 1991), "The Effect of Regulation on California Banking, 1878-1929" (Doti & Runyon, 1996), and "An International Survey of Free Banking Periods: US, California, Australia, Switzerland and Scotland" with David Cassell (Doti & Cassell, 1997). In writing these articles, she interacted with the various dedicated editors of EEBH, such as Ed Perkins and Williams Childs. For people who know Lynne Doti, it is no surprise that when the organization sought her to become the next editor, she accepted the role and proceeded with gusto to elevate the quality of the journal even further. In three short years, she reconceptualized the journal in key ways, and, in her characteristic way, left a blueprint for the succeeding editor (this author) to follow. It is fascinating to observe this entrepreneur at work; one cannot help but marvel at some of the habits of this remarkably effective person.

Delivering a commencement speech at Stanford University in 2005, Steve Jobs gave the wonderful advice to the young graduates there to "Stay Hungry. Stay Foolish. I have always wished that for myself. And now . . . I wish that for you." Always hungry for knowledge and eager to tackle new projects, Lynne Doti embodies that advice. Part of her wisdom resides in her humble recognition of the vast possibilities out there for entrepreneurs of all stripes, academics and practitioners alike, to tackle if they so dare. Lynne Doti's mentorship has inspired many individuals over the years to do precisely that, and thus, her accomplishments are inextricably linked with the successes of all of the lives she has so powerfully touched.

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Economics

Teaching the First Economics Course as if it is the Last

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It is an honor and a pleasure to contribute to this volume in honor of Jim and Lynne Doti. The honor is in joining the truly distinguished group of fellow contributors who appreciate the friendship of Jim and Lynne and their contributions to higher education. The pleasure is in taking advantage of the stated task to consider the way in which economics can play a major role in ensuring a healthy future for American academia, and I might add, for America as a whole. In particular, I shall concentrate on the teaching of an introductory economics course, and why I believe an important opportunity is being missed because of the way it is commonly taught at the university level.

In 1991, Jim and I edited a book called *The Market Economy: A Reader*. The book was motivated by a belief that students being introduced to economics would benefit from focusing on relatively few basic ideas and topics, reading passages from the most celebrated classical liberal economists, and, of course, from some short articles by Jim and myself. A more suitable justification for including our articles is that both Jim and I are convinced that stories are an effective way of teaching almost any subject, and are underutilized in introductory economics courses. So when Jim came up with the idea for our book, and kindly suggested that I work with him on it, we decided to intersperse some of the short articles we had published separately in *The Freeman* to help illustrate the insights of the more renowned economists. I should acknowledge that Jim's articles, based on interesting personal experiences, such as trying to get groceries in Chicago "during the 'Great Snowstorm' of 1967 — a storm not to be confused with the 'Great Chicago Snowstorms' of 1968, 69, 70, . . . 81", contain far better stories than mine do (Doti & Lee, 1991, p. 5).

Teaching the First Course as the Last

The introductory economics course is usually taught as if it is the student's first course in the sense that it is the first of several economic courses the student will take. Even though this is seldom the case, as professors are surely aware, the tendency is to treat the first course as if its primary function is to prepare students for later courses.

Unfortunately, as the late Paul Heyne (a legendary economics teacher at the University of Washington) was fond of saying (and I paraphrase here), if the introductory course is taught as if it is the first course, it is highly likely to be a student's last course. But if it is taught as the last course a student will take, he or she is more likely to find it interesting, learn more, and take additional economics courses.

I am not suggesting that there should be more economics majors. Simple economic reasoning suggests that there can be too many, as well as too few, economics majors. My concern is that the introductory economics course is usually a student's only opportunity to be taught to recognize the fallacies in so many of the economic assertions they will be bombarded with by special-interest groups, politicians, and charlatans of all varieties, as well as by well-meaning friends and neighbors. I don't believe this is happening in most introductory courses because they are typically taught as if their purpose is to provide students with the technical training needed in more advanced courses.

The natural question is: why the tendency for the emphasis on technical training in the introductory course? The most obvious answer is that the course is commonly taught by young professors who are not long out of graduate school, where their survival depended on mastering highly technical material. And once they get a tenure-track job, they know that getting tenure depends on being published in prestigious journals, which requires writing highly technical articles. For most of these younger professors, mathematics and statistical techniques are what economics is all about. It is not much of an exaggeration to say that *the most important thing economics students learn in graduate school is how to take simple ideas and render them completely incomprehensible*. Not surprisingly, introductory economics students are confronted with black boards (PowerPoint presentations) containing numerous diagrams and equations, often supplemented with some simple mathematics (but a little calculus cannot be ruled out), which leaves many students immediately bewildered and soon bored. It can be argued that this approach to teaching is influenced by the textbooks available for principles courses, most of which are encyclopedic in length, full of diagrams, with a little math sprinkled here and there. This is obviously true, but the type of textbooks available are heavily influenced by preferences of professors, who are often not very concerned about what most students are prepared to understand. The desire for a highly technical introduction to economics is not limited to those teaching the course, or even to those who are teaching higher level economic courses. For example, I taught MBA students the only economics course in their program. Some of the students had highly technical backgrounds, but most did not, though they were quite capable of learning the material in the type of course I describe in this paper; one with lots of stories, a few simple diagrams, and no math. A group of finance professors, however, thought I should be preparing my students to take their courses instead of teaching economics, and they put pressure on me via the Dean's office to start using calculus in my course. I was able to effectively resist that pressure. An untenured professor would have had more difficulty doing so. The result, however, is that "difficult" and "boring" are common descriptions of the introductory economics course.

Consider four examples of the type of analysis encountered in most principle textbooks. First, indifference curves are used to show with theoretical rigor that demand curves are, with only an improbable exception, downward sloping. Downward

sloping demand curves are important to economic understanding but, given their plausibility, developing the theoretical basis for them takes time away from discussions that are far more important, and easier to understand, in the introductory course. Yet many textbook writers and professors cannot resist using indifference curve analysis to demonstrate the improbable exception that the consumption of a good might increase when its price increases. A common example of this is the consumption of potatoes during the Irish potato famine when the price of potatoes increased because of a large reduction in the availability of potatoes to consume. Second, the graphical depiction of a firm's long-run cost curve is the envelope of all the short-run costs curves of a firm. One of the highlights, at least for professors, of this analysis is that in the short-run it is seldom a good idea for the firm to produce the output that minimizes its short-run cost. Third, it can be shown, and often is, that imposing a minimum wage can motivate a firm to hire more workers if the firm is the only employer in a community, and no workers in the community leave and no workers outside the community enter in response to changes in the wages paid. This result is driven by the change in the firm's marginal cost of labor caused by imposing a minimum wage, but it is devoid of any reasonable policy significance. Finally, demand curves with a kink at the prevailing price have had an enduring appeal to principles professors and textbook authors despite providing an explanation for a rare, if not imaginary, possibility. The possibility is that a firm's marginal cost curve can move up or down within a wide range without having any effect on the output that maximizes a firm's profit because the kink in the firm's demand curve creates a gap in its marginal revenue curve. This possibility, and the analysis that explains it, is far more fascinating to professors than it is to students. It should be noted that one of the things professors like about these, and other, analytical exercises found in introductory textbooks, is that they lend themselves to questions that have numerical answers, or to multiple choice questions, both of which make grading exams easy.

What these types of analytical examples don't do is provide students with a basic understanding of why some real-world economies are successful and others are not—an understanding that every student in an introductory economics course should have by the time the course is over. This understanding can be acquired with examples and stories that introduce and illustrate a few critical concepts such as scarcity, opportunity cost, marginalism, demand and supply curves, and the role of market prices in making it possible for many millions of strangers to cooperate with each other. The way the introductory course is commonly taught now, not only will many students fail to understand the diagrams and equations, but those who do will likely get an impression of what is required for a successful economy that is terribly wrong.

A Global Network of Cooperation

Much that students learn, or think they learn, from most of the analytical exercises found in most introductory courses is that a successful economy depends on experts with good intentions who know how to manipulate economic decisions in ways that correct problems that would otherwise exist. Those experts would know things like how to break up monopolies to increase competition, regulate the prices of other (natural) monopolies where competition isn't feasible, create monopolies in some

labor markets to equalize bargaining strength between employees and employers, tax some activities to make sure they are operated where marginal social benefits and costs are equal, subsidize other activities to stabilize prices for the benefit of consumers, fine-tune economic activity with monetary and fiscal policies to smooth out business cycles, and reduce poverty and income inequality by transferring money from the wealthy to the poor. It is easy to conclude that economic success depends on electing well-intended and informed politicians so they can enact the policies authorizing the experts to properly control the economy, and make sure they do so.

Without explicit arguments to the contrary, such top-down economic control seems reasonable to most students. Most of the accomplishments they observe appear to result from people knowing what they are doing and intentionally taking action to accomplish particular objectives, such as preparing dinner, taking a vacation, stocking the local grocery store, constructing a high-rise building, and making an automobile. If the student follows politics, he or she sees politicians promising to improve the economy with particular policies, and thereby becoming easily convinced that those politicians, at least those the student agrees with, keep their promises by either making things better, or preventing things from getting worse despite the obstruction of opposing politicians with questionable intentions.

The belief that economic success results from top-down control, motivated by good intentions, is a common misconception that a good introductory economics course can replace with an understanding of what a successful economy requires. Early on, students need to recognize how complicated it is to produce, and make conveniently available, the goods and services that we depend on every day. For example, no person, or group of experts, no matter how capable they are, can make and deliver all of the products that are waiting for us at the local supermarket when we want them. All those products have to be produced from scratch, and that requires literally billions of people, trained in thousands of highly specialized occupations, to somehow coordinate their productive efforts through a global network of cooperation. Making even the simplest product with the quality, and at the cost, we take for granted would overwhelm the ability of any one person. For example, Read (1958) gave a detailed account of the need for a multitude of people with many highly specialized skills to cooperate on a global scale to make something as simple as a wooden lead pencil, and make it conveniently available for a trivial amount of money. Thwaites (2011), meanwhile, chronicled his attempt to make an electric toaster from scratch. After nine months of doing such things as digging iron ore, smelting metal at home, and realizing the hopelessness of actually making plastic (as well as a few other items) from scratch, Thwaites succeeded in making a toaster, almost from scratch, at a cost (not counting the opportunity cost of his time) 250 times more than a far better toaster he could have bought at a neighborhood store. Of course, the problem is not just producing goods and services, but producing them in the quantities and combinations that consumers prefer, which requires that the decisions of all producers and consumers be coordinated.

Achieving this impressive amount of global cooperation, which occurs without any one person, or group of people, being in charge, and which generates patterns of outcomes that no one intends or can accurately foresee, is the fundamental economic problem. As the late Nobel Laureate James Buchanan (1964) argued, explaining how

this cooperation takes place is the primary task of economists. I would add that it should be the primary objective of an introductory economics course. Making students aware of the magnitude of the economic cooperation needed in a successful economy will surely spark the interest in many for an explanation of how this cooperation is possible. Fortunately, this explanation does not require a highly technical approach so common in introductory courses.

Information, the Invisible Hand, and its Alternative

Understanding how huge numbers of strangers can cooperate requires considering how the information that is distributed in tiny fragments in the minds of people scattered all over the planet can be aggregated and communicated to those who can make the most productive use of it, and is done so in a way that motivates them to do so. A good way to begin this understanding is by using the concepts of scarcity, opportunity costs, and marginalism to introduce the demand and supply diagram, showing how market prices that emerge from market exchanges result in the amount of goods that producers supply equaling the amount consumers demand. Of course, this process is simultaneously dealing with many thousands of products under constantly changing conditions, so it seldom achieves complete equality of amount supplied and amount demanded. But the information and incentives communicated by market prices results in an unintended pattern of market cooperation that is far more socially beneficial than could ever be intentionally created by government planning.

The market cooperation needed for a successful economy can be illustrated with real-world stories. Without elaborating on the full range of the different types of this cooperation, consider cooperation between consumers, which can be illustrated in Jim Doti's story about the "Great Chicago snowstorm of 1967" (Doti & Lee, 1991, p. 5-6). After struggling through the snow to get lunch and some groceries at his favorite deli, Jim found it closed and had to continue the struggle until he was able to find a store that was open. He was delighted until, after filling his cart with groceries, he discovered that prices had been temporarily doubled. His first reaction was to walk out and look for another store, but good sense prevailed (he was studying economics at the University of Chicago) and he put the "Coke, Twinkies and Snickers" and some of the "other necessities of life" back on the shelves. By doing this, Jim was acting as if he was as concerned for others, without knowing who they were, as he was for himself. The higher prices were the best measure of the higher marginal values other consumers realized from the items Jim was thinking of buying for himself. Thus those prices gave him the information and motivation not to buy (to share with others) additional units of products when others valued another unit of them (as reflected by the price) by more than he did. We all share with millions of others this way every day, as millions of others share with us, and it is done so routinely and unintentionally that we don't think of it as sharing. The result is an unintentional pattern of cooperation between consumers that is far more socially beneficial than any intentional distribution of goods and services, no matter how public-spirited the intention.

Such examples of market cooperation tie in with discussion of Adam Smith's "invisible hand" made famous in his 1776 book. As impressive as the invisible hand is, however, it doesn't work perfectly, and any introductory course that highlights the

operation of the invisible hand has a duty to consider market failures. Governments don't work perfectly either, however, and given the prevailing view that market failures automatically justify government interventions to correct those failures, government failures should be given as much attention as market failures. With rare exceptions, this is not the case in introductory economics courses and textbooks, with market failure given far more emphasis than government failure (Fike & Gwartney, 2015; Eyzaguirre, Ferrarini, & O'Roark, 2014). This gap would be eliminated in the type of principles course I recommend, by the discussion of several points that can be understood without resorting to complicated diagrams.

First, what are seen as market failures are often the result of markets performing properly by redirecting scarce resources out of less valuable and into more valuable employments in response to such things as changing preferences and technological improvements. Such resource movements necessitate some unemployment, bankruptcies, and other financial reversals that many see as market failures. Second, many failures in markets are caused by government interventions, such as price controls, subsidies, and a host of regulations that create waste, shortages, and unnecessary unemployment and poverty, by undermining market cooperation. Third, most wasteful government interventions are the result of organized groups using their political influence to "purchase" benefits from the government that are more than offset by the greater cost imposed on those who are not a party to the transactions — the general public. This is a clear example of a negative externality that is probably the most commonly cited example of a market failure, but which is a ubiquitous feature of government action. Finally, classroom discussions and principle textbooks point to the lack of perfect information as a market failure. Of course, whether we are considering the information that informs market decisions or political decisions, it will never inform people completely of all the costs and benefits of the decisions they make. But the fundamental reason economies relying primarily on markets are more successful than those that rely heavily on government controls is that market prices communicate better information for making sound economic decisions than voting, lobbying and government mandates do. This provides the clearest and most powerful explanation of government failure and the reason why, when governments attempt to correct market failures, real or imaginary, they more often make things worse instead of better.

It is true that there are examples, such as pollution, where market failure is really the result of the absence of markets, and in these situations government action can be beneficial. For example, when pollution is a problem, a given level of environmental improvement could be achieved at the lowest cost if governments created markets for the right to pollute. But when, as is typically the case, government begins replacing market information and incentives with bureaucratically determined prices (really arbitrary reimbursement rates), detailed regulations and political mandates, it takes an impressive leap of faith to believe that market failures are being corrected.

Moral Concerns

While the introductory course I advocate will be more interesting and more easily understood by more students than the course as it is typically taught, there will be resistance from some on moral grounds. Jim recognized this moral resistance early in

our book when he pointed out that the force that motivates these benefits are difficult to reconcile with “any system of morality that can be described as Christian” (Doti & Lee, p. 5). Jim’s focus is on the self-interest that is highlighted in Adam Smith’s famous statement about getting dinner from the butcher, the brewer, or the baker, not from their benevolence, but from their self-interest, which he quotes in full. Jim also quotes Smith’s more famous “invisible hand” passage to the effect that by pursuing their own gain in markets, people unintentionally do more to promote the public interest, than if they intended to promote it. There is more than self-interest that is seen in moral conflict with the invisible hand, however. We all find morality appropriate for small groups (such as our families, our friends, and small communities) emotionally appealing. Throughout most of human history, people have lived in small groups of hunters and gatherers that consisted of 100 to 150 others, and developed a sense of morality that facilitated the survival of people who depended entirely on their ability to personally cooperate with each other. It is worth noting that hunter-gatherer bands split up when their numbers exceeded roughly 150 people, indicating that beyond that number personal cooperation becomes less effective (Christakis & Fowler, 2011, pp. 247-249). That morality (which I have referred to in several papers as magnanimous morality) requires our willingness to *intentionally* help others at some *sacrifice*, with that help ideally provided *personally* to *identifiable* beneficiaries (i.e., Lee, 2013, 2014). The invisible hand of the market violates every one of those requirements. The help provided through the invisible hand, is motivated by *gain* and not sacrifice; provided *unintentionally*; provided through impersonal markets; and promotes the *public interest* (instead of the interest of an identifiable person or group).

The result is that no matter how well one makes the case for markets as the best means for achieving what are widely recognized as moral outcomes, some will be emotionally resistant to accepting that case because of their moral hostility to markets.

Consider two examples. First, it is difficult to find someone who doesn’t favor conservation. Ask people if they favor speculation, however, and the response is almost always negative, despite a compelling economic case (backed up by clear evidence) that, by responding to anticipated market prices, speculators unintentionally conserve resources more efficiently than government does by deliberately trying to control resource prices or resource decisions. The fact that speculators are motivated by self-interest, not by any intention to conserve resources, causes most people to dismiss the idea that the activity of speculators is socially beneficial. Second, consider the strong moral appeal of barn raising (the only thing most remember from the 1985 movie, *Witness*), where people come together in the spirit of community to help a neighbor rebuild a barn or other structure. Most people would agree that it would be nice if such help could be expanded, with more people involved in providing such help to a wider group of beneficiaries. It has been! It’s called insurance, with help being provided by money from the premiums paid by millions, which allows rebuilding to be done by professionals who know what they are doing, with fewer people falling off ladders and hammering their thumbs. But this help is motivated by profit, and not provided personally, and when thinking about insurance companies, *morally appealing* doesn’t usually come to mind.

It is easy to see how those with little understanding of economics are vulnerable

to arguments that we can have an economy based on the magnanimous morality of the family without having to depend on the invisible hand of the marketplace. Many are persuaded, for example, by popular authors such as Rifkin (2014) who argued that we are moving into a “Collaborative Age” as we experience “an expansion of empathy to include the whole of the human race as our family,” resulting in the quick elimination of “the remaining ideological, cultural, and commercial boundaries that have long separated ‘mine’ from ‘thine’ in a capitalist system mediated by property relations, market exchanges, and national borders” (p. 302-303).

Even economists who recognize the superiority of free markets over government planning can have difficulty giving up the hope of having an economy without what they see as the moral deficiencies of markets. The late Robert Heilbroner, for example, after years of championing socialism, responded to the collapse of the Soviet Union by admitting that “capitalism has been as unmistakable a success as socialism has been a failure” (Boaz, 2005). Yet, he still held out hope that the successes of capitalism could be achieved without its moral shortcomings (Newport, 2015).

Admittedly, some beginning economics students are captivated by the counter-intuitive arguments that by harnessing the power of self-interest, markets do more to generate moral outcomes unintentionally than could ever be generated intentionally. Yet, confining the moral argument for markets to the morality of market outcomes will leave many unpersuaded since they will see those outcomes contaminated by an immoral process. The moral case has to be made by first pointing out that the market process is based on a moral foundation, although it is a morality without the emotional appeal of magnanimous morality. It has to be shown that the morality of the market process is not only compatible with the magnanimous morality of the small group, but works to complement that morality to enrich our lives to a greater degree than either morality can do alone.

I have referred to the moral foundation of the market as mundane morality, which is briefly described as obeying the rules or norms of conduct which are widely accepted and generally beneficial, such as being honest, honoring one’s promises and contractual obligations, treating others with courtesy and respect and refraining from violating their legitimate rights. This is the morality of large groups, and is essential to the widespread cooperation that properly functioning markets provide, and upon which our prosperity and freedoms depend. It should be pointed out that enforcing general adherence to this morality is an important function of government.

The importance of magnanimous morality hardly needs discussion. Few fail to recognize the enormous satisfaction we are able to receive only from the love and commitment we have for our family and friends and that they have for us. Within the small group we care most about, magnanimous morality is the basis for the only reasonable way to achieve the reciprocity and cooperation necessary for harmonious and rewarding relationships. Any effort to base the relationships between people who care for each other on the formal rules and contractual obligations of mundane morality would destroy those relationships and the happiness they provide. The assumption that people are motivated primarily by self-interest, commonly associated with Adam Smith and economists, is useful when analyzing behavior in impersonal dealings with strangers across markets. Of course, market transactions commonly occur frequently

between the same people who deal with each other as friends, partly because it is the most profitable way to conduct business, but also out of genuine friendship. It should also be pointed out that Adam Smith's (1759) first book, *The Theory of Moral Sentiments*, which considered how people deal with each other in personal settings, typically small groups, emphasized the sympathy and concern in our relationships with others. It is in his second book *The Wealth of Nations*, where Smith (1776) was concerned with how people coordinate their actions within large groups (extended markets), and it is in this book that he emphasized the motive of self-interest. But few economists believe that the cold, calculating "economic man" who is motivated only by self-interest, and populates economic textbooks, is a complete description of real people, at least not many of them. As the well-known economist, Ken Boulding (1969), stated, "No one in his senses would want his daughter to marry an economic man, one who counted every cost and asked for every reward, was never afflicted by mad generosity or uncalculating love, [. . .] economic man is a clod" (p. 10).

We all benefit from the efforts of many people all over the world whose efforts on our behalf are not motivated by "mad generosity or uncalculated love." As Smith (1759) pointed out, "in civilized society [each] stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons" (p. 26). We would be pitifully poor if we couldn't enlist the impersonal help of those "great multitudes" and so would those we care for and who depend on our magnanimous morality (Smith, 1759, p. 26). The only way we can mobilize the productive effort of many millions of strangers for our benefit, however, is by providing them with the benefits of our productive effort through the global cooperation and impersonal reciprocity made possible by the mundane morality of markets. The implication is clear — magnanimous morality and mundane morality can work together to increase the sum of benefits we receive from either one or the other. Unfortunately, the emotional appeal of the former morality motivates government attempts to expand it beyond its appropriate limits; attempts that are undermining the benefits of the latter morality, and thus the benefits of both.

To illustrate, consider two situations. In the first, we are able to help our few loved ones and close friends with our own unspecialized efforts. But we can do nothing to assist the multitude of strangers whom we don't know and will never meet, and we can expect no assistance from them. In the second situation, we are able to help hundreds of millions of strangers improve their lives through our highly specialized efforts, with our help being reciprocated by them, allowing us to do far more for the few we know and love than is possible in the first situation. It is difficult to imagine anyone preferring the first situation over the second. Yet, because the reaction to the magnanimous morality of small groups is emotionally elevating, while the self-interest of mundane morality and market exchange is widely viewed with repugnance, well-meaning people commonly vote for politicians who promise a more compassionate and caring economy. The result has been to hamper the market cooperation that, over the past two centuries, has allowed us to escape the poverty that is guaranteed by situations like the first, and enrich our lives, both morally and materially, by moving to situations like the second.

Any introductory economics course designed to promote the greatest understanding

of the tremendous advantages we all realize from the invisible hand has to confront the widespread skepticism that exists about the morality of markets. No one would argue that the moral argument just presented will overcome the resistance of all students to the strictly economic argument for markets. But by exposing students to a serious argument on how the mundane morality of markets enhances, and is enhanced by the magnanimous morality of small groups, more of them are likely to complete the introductory course with a solid understanding of, and appreciation for, the market process.

Contributing to the Academy

Assuming that my suggestions for teaching the introductory economics course will result in more students receiving a good understanding of basic economics, I now suggest how that could contribute to the academy. My suggestions are rooted in something for which there is broad agreement on university campuses, at least as measured by the verbal support it receives (i.e., the importance of critical thinking). Given the number of economic myths that have achieved the status of revealed truth in the minds of many, an economics course provides a wonderful opportunity to teach students how to begin thinking critically about much that he or she hears routinely on most university campuses, and beyond.

Consider some of the critical-thinking contributions a student, having taken a good introductory economic course, could make in other courses. When the importance of social cooperation is mentioned (possibly in connection with some diversity program) a student could point out that the most effective force for social cooperation is markets and the prices that emerge from the voluntary exchange of private property, and back it up with a comment about the multitudes of people who had to cooperate with each other in order to make the coffee available at the diversity meetings. The student can follow up by commenting that diversity, broadly considered, increases the gains from specialization and market exchange that harmonizes the differences between people—something worth celebrating. On the other hand, when our differences are politicized, they are likely to end up being “celebrated” with some very high-powered fireworks. Also likely to come up is income redistribution to help the poor, which of course almost always means government redistribution. Again, a student can make an unexpected contribution to the class by making the point that markets are constantly redistributing income and doing it more effectively than government if the objective is reducing poverty. Markets redistribute income from less productive to more productive activities, while government redistribution is typically in the other direction. Government transfers large amounts to the poor in ways that adversely affect their incentives to engage in productive activity, although many overcome those incentives. But the larger amount of government transfers go to those who are not in fact poor, with much of the transfers going to the wealthy for doing unproductive things at excessive cost, like growing cotton in the desert, or producing so-called green energy.

One of the silliest examples of uncritical thinking on campuses is the lemming-like tendency to blame such things as high prices, financial bubbles, recessions, income inequality, global warming and high salaries for CEOs on greed. Of course, we all have a healthy regard for our own self-interest. As Smith (1759) stated, “Every man is, no doubt, by nature, first and principally recommended to his own care; and as he is fitter

to take care of himself than of any other person, it is fit and right that it should be so” (p. 82). So our student might point out that “greed” is a ubiquitous influence and blaming high prices, for example, on greed provides the same deep insight as blaming a plane crash on gravity or a burning building on oxygen. Said student might ask why those who blame rising gas prices on greedy oil companies fail to give them credit for becoming less greedy when oil prices are declining.

I am not suggesting that an introductory economics course, no matter how good it is, can turn hordes of students into economist snipers who patrol campuses shooting down sloppy economic thinking wherever it appears. It might create a few, however, which would be a useful contribution to the scholarly enterprise in the academy. It might come at the cost of more safe rooms on campuses, fully equipped with milk, cookies, puppy dogs and counselors, where students can recover after hearing ideas that make them uncomfortable. What I am suggesting is that more introductory economics courses, of the type suggested in this chapter, will improve the understanding students acquire of the enormous benefits we all receive from the cooperation made possible by markets. This would make an important contribution to the academy, and to America.

Conclusion

My proposal for significantly changing the introductory economics course may leave the impression that I am something of a maverick, and that may be correct. After all, I gave a Henry Salvatori lecture at Chapman University in March 1994 titled, “The Economist as an Intellectual Maverick.” My point was that almost all economists are seen as mavericks by the majority of social science and humanities professors on most campuses. The introductory course I recommend would be sneered at by many of those professors as blatantly ideological. I agree that it is ideological, as any economics course almost has to be unless it is taught strictly as a course in applied mathematics, and even then the choice of topics would probably reflect some ideological bias. I suspect that the real complaint professors in these other disciplines have with economics is that, no matter how it is taught, it typically considers with skepticism the social policies most of them favor for reducing poverty, protecting the environment, fostering social harmony, improving education, promoting resource sustainability, and achieving other desirable objectives. It is not that economists are opposed to these objectives; they strongly favor them. They do, however, add intellectual diversity to the academy with a different understanding of how millions of people with diverse objectives and talents can be motivated to cooperate with each other to achieve the best balance of a host of desirable objectives, given that doing more to achieve some means doing less to achieve others. And I am convinced that the student taking the course I recommend would more likely acquire this understanding than the student taking the introductory course as it is typically taught currently.

I am also confident that most economics professors would agree with me, at least those who have been teaching long enough to have seen thousands of eyes glazing over during the lecture on the importance of the tangency position to human enjoyment. The overwhelming majority of economists recognize that understanding the “invisible hand” is essential to understanding economics. Without the ability to

aggregate globally dispersed information, communicate bundles of that information to those in the best position to make the most productive use of it, along with a strong incentive for them to do so, most of the problems economists worry about today wouldn't be problems at all, because the wealth to do anything about them simply wouldn't exist. This doesn't mean that important disagreements about the "invisible hand" and markets don't exist among economists. But the disagreements have less to do with markets than with the political process. All economists, including those who are strong advocates of markets, are fully aware of market failures. The most important difference between those on different sides of the ideological spectrum is that those on the left invariably have more confidence in the ability of governments to correct market failures than do those on the right. There is very strong agreement among economists on microeconomic issues such as the effect of tariffs, rent control, minimum wage, mandated benefits, and subsidizing agricultural production. The big disagreements are on macroeconomic issues, such as what causes the business cycle, the effect of deficit spending on economic productivity, whether there is a stable trade-off between employment and inflation, and how much discretion over the money supply the Federal Reserve should have.

Let me close by speculating that Jim will agree that the course I have described in some length would be an improvement over the way introductory economics is commonly taught today. But if he doesn't, I would take his disagreements seriously, and re-evaluate my argument, and possibly my position. I say this not because I know anything about Jim's politics—I don't—but because I know he is a very good economist.

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Adam Smith's Fair and Impartial Spectator: Fairness was About Fair-Play Rules for Society, a Pre-Condition for Wealth Creation

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In his first book, Adam Smith used the metaphor of the fair and impartial spectator to articulate his model of the maturation process whereby people learn to follow general rules (norms) that take into account the human sentiments of gratitude and resentment in others. Through the impartial spectator, human action is governed by self-command. I will show why, in Smith's model, our self-interested nature is a key part of the process of learning to act in sympathetic other-regarding ways in our close knit communities; how the rules of propriety naturally inform property rights in the civil order, and thus to set the stage for explaining the wealth creation process articulated in his widely celebrated second book.

[T]here are indeed some universal moral norms and values, but to think that 'fairness' is among them is an Anglocentric illusion. - Anna Wierzbicka (2006, p. 162)

Although Adam Smith referred to the "impartial spectator" over 70 times in his first book, *The Theory of Moral Sentiments* (TMS)(Smith, 1790), he spoke only once of the "fair and impartial spectator": "We endeavor to examine our own conduct as we imagine any other fair and impartial spectator would examine it" (Smith, 1790, p. 110). This form of the metaphor best enables us to understand Smith's conception of the maturation process wherein we become socialized by gradually modifying our behavior to follow general rules that meet with the approval, and to avoid the disapproval of our neighbors.

I will use a propositional style of discourse to articulate and discuss Smith's model of human sociality, and the central role of the metaphor of the impartial spectator, beginning with some propositions that provide background axioms and principles. The power of Smith's work is that it accommodates the observed tendency for humans to

regard others in their more intimate groupings, explains the emergence of property as it occurs in the civil order of government, and accounts seamlessly for the prominence of self-interested action in impersonal markets, leading to specialization and innovation, the cause of the wealth of nations. We are strapped in finding a modern equal to Smith's grand accounting for the deep meaning he extracted from carefully observing the diversity of human conduct.

Proposition 1: In Smith's model, learning to become social is not about altering our self-interested or self-loving nature, but rather incorporating that nature into a theory of the emergence of socializing rules through processes of cultural consent.

In modern language, each person is characterized by strictly increasing individual utility functions defined on their own valued outcomes, say $U(\text{own})$. If we think of an outcome as always having a monetary equivalent, then utility is strictly increasing in monetary amount. This non-satiation axiom (that for each of us more is better and less is worse) is common knowledge. Thus,

Every man is, no doubt, by nature, first and principally recommended to his own care; and as he is fitter to take care of himself than of any other person, it is fit and right that it should be so (Smith, 1790, p. 82).

and, [. . .] every animal was by nature...endowed with the principle of self-love [. . .] (Smith, 1790, p. 272).

We are not ready to suspect any person of being defective in selfishness. This is by no means the weak side of human nature, or the failing of which we are apt to be suspicious. Carelessness and want of economy are universally disapproved of, not, however, as proceeding from a want of benevolence, but from a want of the proper attention to the objects of self-interest (Smith, 1790, p. 304).

Generations of modern economists were indoctrinated with a thought process in which every action maps into an outcome and thence into preference and, implicitly, in which this mapping can be reversed via individual maximization. Where action is other-regarding instead of strictly self-regarding, it is tempting to simply change the arguments of the utility function to include other as well as one's own outcomes. Smith's model, however, is in no sense based on the hypothesis that individual preferences, redefined as including own and other outcomes, are the source of the concern people have for others. This is explicitly stated and defended in the above quotations, and implicitly assumed in the key propositions on beneficence (7 and 8) and justice (9 and 10) described below.

Indeed, the opposite is implied; common knowledge of self-love is essential if we (through our impartial spectators) are to make appropriate judgments concerning proper conduct in human social relations. Contrary to neoclassical and modern economics, for Smith, self-love did not imply that individuals would in all, or perhaps even in most, circumstances choose actions to maximize the utility of own outcome,

U(*own*). Rather, it is through knowing that all in an interactive community (extended family, neighbors, associates) are self-interested that we know that a given action is hurtful to anyone who receives less, and beneficial to anyone who receives more. In Smith's model of sympathetic fellow-feeling, common knowledge of how alternative actions hurt or benefit others as well as oneself, provides the foundation whereby people learn to follow rules that are appropriately other-regarding, that properly take into account the feelings (the gratitude and resentment) of others.

If you do not know what hurts or benefits others, you cannot know how to modify your actions in order to live harmoniously with others.

The neoclassical and modern error is to apply the Max U(*own*) calculus to all decisions, regardless of circumstances, and without regard for the pattern of benefits and potential hurt in our more intimate groupings where enforcement was, and always had been, endogenous. The behavioral economic "social preference" error is to replace that description with a just-so utility function of the form U(*own, other*), in effect rescuing Max U. The methodological error is to focus on outcomes instead of process. This is why Smith also gave us clear thinking on liberty as the first principle of human society. He believed that liberty was the source of sustainable social and economic harmony.

Proposition 2: Social motivation arises from the individual's desire for praise and praise-worthiness and the desire to avoid blame and blame-worthiness, which serve the fundamental values of propriety and harmony in the evolution of local order from local rules.

[T]o feel much for others and little for ourselves, that to restrain our selfish, and to indulge our benevolent affections, constitutes the perfection of human nature; and can alone produce among mankind that harmony of sentiments and passions in which consists their whole grace and propriety (Smith, 1790, p. 25).

Man desires, not only praise, but praise-worthiness; or to be that thing which, though it should be praised by nobody, is, however, the natural and proper object of praise. He dreads, not only blame, but blame-worthiness; or to be that thing which, though it should be blamed by nobody, is, however, the natural and proper object of blame (Smith, 1790, p. 113-114).

Hence, the motivation for action in our more intimate groupings is not itself utilitarian; rather Smith models the process whereby we modify self-interested choices in the light of learning what other people will go along with. Praise and praise-worthiness are means for describing that social approval, but the resulting approved conventions require each to know the pattern of hurts and benefits resulting from an action. Since all are self-interested, we can judge who is hurt or benefits from an action and integrate that essential knowledge into our learning of rules in which our actions are praised/praise-worthy or are not blamed/blame-worthy. Thus, other-regarding behavior does not derive from any other-regarding outcome utility, U(*own, other*), but rather is the result of U(*own*) as an input to our socialization. Although the new behavioral utilitarian would modify Smith's model by assigning everyone an

individual social preference function, this path was not followed until after economic thinking was shaken by the rejection of neo-classicalism in small group experiments, especially two-person trust and other games in the 1980s and 1990s. The work of Berg, Dickhaut, and McCabe (1995) was the key paper that initiated a large subsequent literature (Smith 2008). By then Adam Smith's work had over two centuries of priority, and deserved careful examination of how he was able to model small group behavior within the framework of self-interested individuals. Moreover, in impersonal markets we also rely on *U(own)* in choosing to take action. Wilson (2010, p. 78-81) contrasted how the word "preference" is used to interpret market decision with how it applies to social interactions. There is no need to model the individual as a divided self; rather, we can model one self-interested individual in imperfect self-command of his local relationships while simultaneously responding to the external order of prices in markets. However, economic and social policy is threatened by human failure to understand that the rules of the local order cannot be applied to those of the extended order, or vice versa, without damage to the one or the other (e.g., Hayek, 1988).

Proposition 3: The process of learning to be sociable—maturation—is to learn propriety.

Smith uses an ingenious mental experiment — his *soziale Gedankenexperiment* — to articulate his conception of the socializing process. We are asked to imagine an individual growing up without any communication with another human being. For Smith, such a solitary individual "could no more think of the propriety or demerit of his own sentiments and conduct, of the beauty or deformity of his own mind, than of the beauty or deformity of his own face" (Smith, 1790, p. 110, 192-193). A solitary person can see none of these things in the absence of a social mirror. Raise him in society, and that mirror is supplied in the form of the "countenance and behavior" of all who he lives with, who never fail to express their sense of the propriety or impropriety of his actions (Smith, 1790, p. 110). From this experience each individual is able to internalize a view of the appropriateness of his own conduct and gradually acquire personhood. For Smith, "mind" is a social creation, whether it involves our conduct in the choice of context-dependent action or our perceptions of facial or body beauty. There is no individual psychology separate and distinct from social psychology. Psychology in this sense must begin with principles acquired from our human sociability.

Proposition 4: The concept of 'fairness' lives in rule space, and it corresponds to the sports metaphor of fair play in which people are motivated to choose actions that avoid committing fouls.

Hence, Smith uses *fair* in its 18th century meaning that was, and is, a unique English word. As observed by the distinguished and influential linguist, Anna Wierzbicka (2006):

The ubiquity of the words *fair* and *unfair* in modern English discourse, across a wide range of registers, is all the more remarkable given that these words have no

equivalents in other European languages (let alone non-European ones) and are thoroughly untranslatable (p. 141).

And again,

'fairness' is a uniquely Anglo concept, without equivalents in other languages, except, as for example in German, as a loan from English (*das is nicht fair*, "that's not fair"). At the same time, in Anglo culture this concept is so central that many speakers of English imagine it must be universal, perhaps even innate ... there are indeed some universal moral norms and values, but to think that 'fairness' is among them is an Anglocentric illusion (Wierzbicka, 2006, p. 160-162).

And in Polish it is to *nie fair* where Wierzbicka (2006) reported resisting this word loan when her bilingual daughters, contrary to her own native language and cultural experience, began thinking in terms of the English word. Her final summary applies without modification to my representation of Smith and his concept of the fair and impartial spectator in this paper:

In a way, sport — especially team sport — provides a perfect model for 'fair' interaction because the emphasis is on rules and procedures, which are blind to the individual players' interests and which everyone voluntarily accepts (Wierzbicka, 2006, p. 166).

I want to elaborate on Wierzbicka's team sport metaphor in relation to Smith's idea of fair interaction. When teams are playing other teams, their play must accord with the rules, with no fouls allowed by the referee who monitors and levies appropriate penalties under the rules of team vs team conference play. These are analogous to "property rights" in the economy, which govern the interaction of economic agents in their economic world. Within each team there are informal rules by mutual consent that support coordination and leverages the group's action in competition. These internal rules of "fair-play" may be broken by an individual tempted to leverage his recognition by favoring himself over assistance to another that would improve coordination effort and team score over the individual's score. These are analogous to "propriety rights" in *The Theory of Moral Sentiments*. When these rules are broken, dissention sets in and team effort is disharmonious; outwardly it is inefficient, but Smith is examining its deeper cause in human sociality.

Proposition 5: The metaphor of the fair and impartial spectator defines the processes whereby we first judge the conduct and character of our neighbors, then devolve or pass judgment concerning the conduct and character of ourselves.

These two parts of the judgment process are paraphrases of the subtitle of TMS from the fourth edition, which appeared in 1774 (e.g., Raphael & Macfie, 1976, p. 40). The judgment concerning our own conduct gradually takes the form of self-command which evolves from our two-state experience with failures of character in the marginal

moment (the man of yesterday) that are reconsidered in the cooler light of subsequent reevaluation (the man of today). Thus there are two occasions wherein we are afforded the opportunity to view our conduct from the perspective of the impartial spectator. The first is at the time we are poised to act. The second occurs after having acted. In both cases, our sentiment is quite partial, but it is the most partial when it is important that it be impartial. At the time of action, the passion of the moment interferes with an impartial evaluation. Although afterward, the prompting circumstances and passion allow a cooler impartial judgment, too often — in comparison with the heat of the moment — the consequence seems unimportant, and except for vain regret, we may fail to secure ourselves from like errors in the future (Smith, 1790).

This self-deceit, this fatal weakness of mankind, is the source of half the disorders of human life. If we saw ourselves in the light in which others see us, or in which they would see us if they knew all, a reformation would generally be unavoidable. We could not otherwise endure the sight (Smith, 1790, p. 158-159).

Proposition 6: We are rescued, however, from the frailties of our conscious judgments by our stronger tendency toward ingrained rule-following conduct — general rules that map particular circumstances into actions that inspire the gratitude, and avoid the resentment, of others.

Fortunately for our species, nature has not entirely abandoned us to the delusions of self-deceit triggered by our self-love. From our earliest exposure to the conduct of others, we gradually become attuned to general rules that constitute acceptable “fit and proper” actions sensitive to the context in which they take place (Smith, 1790, p. 159).

According to Smith, our conduct takes key categorical forms that I will summarize in the next four propositions. The first two govern beneficent actions; the second two concern hurtful actions, and they encapsulate Smith’s theory of justice and property rights.

Proposition 7: Intentionally beneficent actions alone deserve reward because of the gratitude invoked in others (Smith, 1790, p. 78).

This proposition provides the emotional foundations of reciprocity, a universal concept requiring an explanation. Thus for Smith, reciprocity is not a satisfactory explanation of the choice outcomes observed in trust games, as in McCabe, Rassenti, and Smith (1996). Rather, ‘reciprocity’ is an un-modelled name for the result we observe, and Smith sought a deeper explanation (for a careful discussion of these issues see Wilson, 2008). Our beneficence is most naturally directed to those whose beneficence we have already experienced, and therefore kindness begets kindness (Smith, 1790, p. 225). In repeat interaction with our associates, reputational gains from sociability yield human betterment, and “tend to unite men in society, to humanity, kindness, natural affection, friendship, esteem” (Smith, 1790, p. 243). This phenomenon is captured in the modern phrase ‘I owe you one’ — common across many languages — in which the beneficence of another is acknowledged by an implicit obligation to do a future favor in return. The

debt is discharged by an ‘in kind’ transfer (i.e., in the same way, with something similar). One cannot resist interpreting the exchange as de facto ‘in kind-ness.’

Proposition 8: The want of beneficence cannot provoke resentment and punishment, because beneficence is freely given and cannot be extorted (Smith, 1790, p. 78).

These two propositions have been tested in the context of extensive form trust games (Smith & Wilson, 2014, 2016). Under anonymous pairing, the traditional game-theoretic analysis predicts no cooperation. However, in accordance with Proposition 7, half or more of first-movers beneficently offer cooperation, and two-thirds of their paired counterparts eschew the more lucrative opportunity to defect, instead rewarding the first mover by choosing the cooperative outcome. Proposition 7 retroactively predicts the findings in early trust games better than neoclassical economic analysis. In new experiments, the test of Proposition 7 is replicated, and a modification of the same game is used to test Proposition 8. If first movers choose not to offer cooperation, play passes to second movers who are provided a costly option to punish their paired counterpart for failing to offer cooperation. None choose this option. Implicitly, the second mover’s response in these experiments freely acknowledges the right of the first not to act beneficently by offering cooperation.

Proposition 9: Intentionally hurtful actions alone deserve punishment because of the resentment invoked in others. The greater the hurt, the higher the resentment, and, in proportion, the greater the punishment (Smith, 1790, p. 78, 83-84).

This proposition is the foundation of Smith’s theory of property rights. Our human impulse is to punish intentional actions of a hurtful nature:

Resentment seems to have been given us by nature for defence, and for defence only. It is the safeguard of justice and the security of innocence. It prompts us to beat off the mischief which is attempted to be done to us, and to retaliate that which is already done; that the offender may be made to repent of his injustice, and that others, through fear of the like punishment, may be terrified from being guilty of the like offence (Smith, 1790, p. 79).

Accordingly, in the civil order of government we find that murder, the greatest evil, commands the greatest punishment; theft and robbery, which deprive us of our lawful possessions, command a greater punishment than the violation of contract which merely frustrates our expectation of gain (Smith, 1790). (See Proposition 11 for further discussion and explanation of the differential penalties for theft or robbery versus violation of contract).

Justice for Smith is a negative virtue that results in a large residue of allowable actions after using proportioned punishment to limit specified hurtful actions of injustice. In Smith’s conception, we do not set our sights on a positive ideal of justice — an abstract, slippery and vaguely defined state. Rather, we address ourselves to

specific acts of injustice where — as I interpret Smith — we are likely to find common agreement because of our common experience of the circumstances, nature, and extent of the hurt. Eliminate these infractions one by one, and in this evolutionary process we gradually produce a more just society, but always within a framework of freedom to act and explore all options not specifically interpreted as unjust. This model is severely challenged today as university campuses are beset by new conflicts between the traditional right of free speech and expression, and the demand for new rights in which various social group identities (atheists, women, sexual orientation, ethnicity, race, etc.) want protection in the classroom and in campus commons against offensive speech or conduct or they seek group space (restroom) assignment, or separate but equal activity space; all in the interest of feeling safe and comfortable. The consequence is wide disagreement on what the rules should be.

At this juncture in the discussion it is natural to ask which of these two sentiments — beneficence or justice — is the more essential to human society. On this, Smith leaves us with no doubt as to his views. We are informed that society will certainly flourish if it is bound by a common bond of gratitude, friendship, and esteem, but where these conditions do not exist, society, though reduced in happiness, may nevertheless not be dissolved. For society can subsist merely from a common sense of its usefulness, as with a group of merchants, and be supported by a mercenary exchange of good offices according to an agreed valuation.

This contrast, between a more intimate social in-group and one bound by a general recognition of the usefulness of association, is illustrated in the evolution of an experimental economy studied by Kimbrough, Smith, and Wilson (2008). The economy consisted of three dispersed villages, each consisting of four houses and their associated fields. Each village produced two out of three world products, and each individual village member received private utility from all three products. Hence, each village had to trade with at least one other village to fully prosper. Two members in each village were empowered to travel to a common “merchant” area where trade could occur, then return to their home villages. In the course of the experiment each village attained a degree of closeness never matched by the merchant area. The village chat rooms were alive with the use of “we,” whereas “the interactions in the merchant meeting area are noticeably more impersonal than those in the villages” (Kimbrough et al., p. 1025).

Society, however, cannot subsist among those who are at all times ready to “hurt and injure one another” (Smith, 1790, p. 86). Hence, beneficence is less critical to a society's existence than justice. Although society may subsist in the absence of beneficence, it will soon be destroyed by rampant injustice. Smith's oppositions to slavery, mercantilism, imperialism, colonialism, and taxation without representation were firmly rooted in his theory of socioeconomic development. Thus (Smith, 1790, p. 81-82),

Proposition 10: Choosing to forgo actions of a hurtful nature does not merit reward.

While in the civil order of law we punish infractions of justice, we do not reward people for obeying the law. There is no reward for stopping at a red light or for leaving your neighbor undisturbed. These are your duty, and call for no explicit rewards,

though in following the law we hope that others will do likewise and all benefit.

Proposition 11: There is an asymmetry between gains and losses: “We suffer more when we fall from a better to a worse situation, than we ever enjoy when we rise from a worse to a better” (Smith, 1790, p. 213).

Note that Smith’s fundamental concept of the asymmetry between gains and losses is a modern idea, rediscovered in experimental psychology, and an important element in the recognition of Daniel Kahneman (2003) for the 2002 Nobel Prize in Economics. For Smith, the concept was central not only to understanding aspects of human action, but also in how it informed the content of differential punishment for loss from theft and robbery versus loss from contractual promises. The asymmetry between gains and losses essentially follows from an asymmetry between joy and sorrow. Most people, reasonably situated and not destitute, can rise above that state, but little can be added to that state in comparison with what can be taken from it: “Adversity, on this account, necessarily depresses the mind of the sufferer much more below its natural state, than prosperity can elevate him above it” (Smith, 1790, p. 45). Moreover, this asymmetry is not only a private, or utilitarian, experience:

It is averse to expose our health, our fortune, our rank, or reputation, to any sort of hazard. It is rather cautious than enterprising, and more anxious to preserve the advantages which we already possess, than forward to prompt us to the acquisition of still greater advantages. The methods of improving our fortune, which it principally recommends to us, are those which expose to no loss or hazard (Smith, 1790, p. 213).

Smith (1790) uses Proposition 11 to provide us with an explanation of why punishment is more severe for theft and robbery, a criminal offense, than for violation of contract, which is a civil offense.

If Smith’s *Wealth of Nations* (1776) is read as a sequel to his earlier work, the continuity in his thought is compelling, and it contrasts sharply with post-neoclassical economic thought in the 20th century. For Smith, economic development is the next great step in a culture that has evolved rules of fair play and is accustomed to well-practiced social interaction; trade comes from the same sociability, and thus begins his second book.

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An Introduction to the Datini Archives: Early Capitalism in Renaissance Tuscany

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Dedicated, with respect and affection, to Jim and Lynne Doti.

As a mathematician, I wasn't sure what topic I (Daniele C. Struppa) could choose to write something in honor of two colleagues, and friends, whom I profoundly respect like Jim and Lynne Doti. For sure, something that could be connected to economics, since both Jim and Lynne are distinguished and accomplished economists. And since Lynne has published and worked in the area of history of economics on an institutional level, I started to narrow my thoughts on aspects that might speak to the history of economics, especially as it concerns the way in which economic and financial considerations have shaped the development of the modern world. And maybe, because of my own disciplinary inclination as a mathematician, some moment in the history of economics when mathematics and its development played an important role. But what finally focused my attention was the Italian heritage that Jim always proudly remembers. And this became my own 'perfect storm'. I decided I was going to concentrate on a key moment in the history of Italian economic institutions. This is when I remembered reading a well-written class paper on this subject by my former student, Anja Kruslin, who agreed to coauthor this work. And so, this article is now a way in which both a professor and a student honor the contributions of Jim and Lynne to our university.

Chapman University, of course, is not new to the celebration of the unique contributions that Italians have given to the creation of modern capitalism. We should remember, for example, how on the campus grounds, there is a bust of Amadeo Giannini, the Italian American banker who founded the Bank of Italy in San Francisco in 1904, which later merged with Bank of America Los Angeles, to give birth to Bank of America. Giannini's presence on Chapman's campus is not simply a sign of respect for one of the great Italian-American entrepreneurs, but is particularly poignant because of the personal friendship between Giannini and our own Charles Clarke Chapman. The

interesting and intricate set of connections between these individuals, and the banks they helped create, is beautifully described in Lynne Doti's (1980) *Banking in Orange County: Early Years*.

But Chapman's acknowledgment of the intellectual contributions of Italians to the modern world goes well beyond relatively recent history. Indeed, among Chapman's many busts, which commemorate the more than 100 endowed chairs and professorships that Chapman boasts, we find the Italian Fra' Luca Pacioli (1447-1517) famous for many things, among which is the fact that he counted Leonardo da Vinci among his students (Leonardo himself illustrated Pacioli's treaty, *De Divina Proportione* with beautiful drawings of several regular solids), but whose real fame rests on his invention (or maybe refinement and codification of what had already been adopted in other cultures) of the 'partita doppia' or, as we call it in the Anglo-Saxon world, the 'double entry bookkeeping' (De Roover, 1956). And it was this idea, the notion that every transaction should be annotated both on the credits and on the debts ledger, that opened the path for the increasingly complicated accounting that the rapidly developing world of the early Renaissance needed.

In this short article, we have therefore decided to offer a modest introduction to a phenomenal archival record, available to scholars and students in the Tuscan city of Prato, and known under the name of the Datini Archive, named for the merchant Francesco Datini who painstakingly recorded his financial life from 1363 to 1410 when he passed away.

We offer this introduction, as well as a few reflections on what the Datini Archive tells us, as a sign of our affection and respect for Jim and Lynne. At the same time, we hope that these preliminary notes may serve as an incentive to students, maybe to those Chapman students who visit Italy and in particular Firenze (Florence) during their study-abroad semester, to investigate the origins of our current market systems by going straight to the sources. Few things are more instructive than the reading of original documents, since what later commentaries offer is almost unavoidably tainted by perspective, and the only way to really know, is to deal with unadulterated original sources.

Renaissance, Mathematics, and Accounting

Commercial arithmetic was likely developed by the Phoenicians, the great merchants of the early Mediterranean, whose colonies (starting from the Eastern Mediterranean coasts of what is now Lebanon) extended up to the Gibraltar straight (and possibly beyond, with a few routes going into Atlantic waters and touching Western Africa). But it was only the merging of the texts of different cultures (from Asia, as well as from the Mediterranean) that helped develop the means by which merchants regulated trade (for a more thorough discussion, see Kruslin, 2015). Mathematics, at least in the Hellenistic tradition, was a discipline that encompassed music, astronomy, arithmetic, and geometry (in what was known as the quadrivium), but with the increasing need for merchant transactions, it had developed an applied character (to help merchants in their business) next to its philosophical and almost mystical aspects (e.g., White, 2011). In a way, mathematics was losing (or at least was softening) its theoretical character, and

its development was instead becoming a necessity to the further development of the merchants' capital investments. Meanwhile, trade was able to grow even faster because the problems merchants faced before — of inventory, tracking, and making predictions — was solved by mathematics. This relatively basic math would later develop into more complex financial calculations, leading to new policies and institutions because it helped cut costs. While this is not an article on Renaissance mathematics, it is not incorrect to claim that the pressures from the work of the merchants, together with the increasing cultural contact between the world of Islam and the remnants of the Greek world, is the terrain on which Algebra eventually developed (Eves, 1990).

As strange as it may seem, the Italians, for a while, continued to use the quite impractical Roman numerals as the language of financial calculations. Even though transactions became more complex in nature due to the increased amount of exchanges, the Arabic numerals that had been made available in the 12th century were only adopted when the need for simple calculations became pressing. That need was not present until greater capital investment occurred, which was around the 14th century. While Hindu-Arabic numbers were much more efficient, it took 300 years for them to be introduced into mercantile activity. In 1299, their use was even banned by the Florentine *Arte di Cambio* — the Guild of Money Changers. What helped the integration of the new numeral system into the culture of business was the adoption of double entry bookkeeping that, while formalized by Luca Pacioli, had already surfaced in the Islamic and the Indian worlds (Lall Nigam, 1986; Zaid, 2004). One should not be surprised at what appears to be a cross-national exchange of ideas, since early Renaissance was marked by the increase of commercial routes.

Datini, an Italian international merchant and banker of whom we will speak more of later on, was one of the first to implement these new ideas in the 14th century. Datini's large international trading business and networks of credit, which spanned from London to Constantinople, were impractical to manage using the old European methods of accounting. In fact, now that we can browse through Datini's archives, we see clearly the transition from single to double entry bookkeeping because he kept accounts of his books for almost half of a century. His books show the use of single entry bookkeeping from 1367 to 1372, a transition period after 1372, and double entry starting in 1390 (Istituto Datini, n.d.; Kruslin, 2015).

But the success of markets needed more than just good bookkeeping. It required reliability, and risk management. Both these innovations came through the standardization of the transfer of goods and funds. This reliability was made possible through the increased use of and adjustment of the bills of exchange and checks. Once merchants reached the East, they would first handle their bills of exchange and bank transfers; these two instruments allowed the merchants to transfer funds, both within the same locality, as well as between distant cities (White, 2011). This allowed for one element of the danger of transferring goods to be eliminated, creating a consistent standard for borrowing. Commissions paid for honoring the bills of exchange served as a way to skirt the Church's ban on usury, thereby allowing a means for gaining interest. Datini was again one of the first to adopt the check as a new form of payment in 1398 when he opened a bank with a partner in Firenze. Checks ensured safety because they offered a method of transferring funds without having to carry actual cash in

person. Because funds could be transferred with relatively greater safety, the risk of loss that came from carrying and transferring more capital decreased tremendously. Hence, those with wealth had more incentive to use their capital in economic endeavors. The circulation of this capital alone was enough to inspire more market activity, and led to greater opportunity for investment.

We cannot do justice to this phenomenal period in one small section of this paper, but we hope to at least offer a stimulus for the readers, who will find in this space-time event (Italy in the 1300s) one of the most exciting instances of the development of mathematics together with the satisfaction of the social needs of a society in a rapid and revolutionary evolution.

The Datini Archive

Francesco Datini (1335-1410) was a wealthy merchant from the town of Prato, located approximately 16 miles northwest of Firenze. In the 14th century, this area was one of the most important cultural centers on the Italian peninsula. Italy, of course, did not exist as a political entity, but those were the years in which it began to take shape as a cultural entity. They were the years during which the Italian language was forged, as the Tuscan dialect became increasingly important, a reflection both of the economic power of Firenze, as well as of the work of literary giants such as Dante, Boccaccio, and Petrarca. And of course, those were the years that saw the ascent of the Medici family, and such an ascent meant the growth of commerce.

Prato itself follows along these fault lines. Its origins date back to the 10th century, as *Castrum Prati* (the Fortress of Prato), and we know that in the 11th century, the river Bisenzio that runs near the city was already being exploited to provide energy for machinery connected with a nascent textile industry.

This is the context in which the Datini family evolved. Francesco Datini's parents had died early (of the plague), his father Marco had been an inn-keeper, and Datini became a merchant after being an apprentice (as was the custom at the time), and began his commercial activities in Avignon, France which at the time (until 1378), was the seat of the pope. Datini moved back and forth between Prato, where he bought a 'casolare', where now his archive is being kept, and Avignon, where he married Margherita, the daughter of a very wealthy Florentine merchant. Interestingly enough, the archives that are available, contain a significant amount of correspondence between Datini and his wife, an important peephole into the life of a wealthy Tuscan family during the early Renaissance.

Datini, in a sense, exemplified the notion of global citizen, and it is remarkable to see how in a rather short period he was able to connect his activities under what we should call his own multinational background. Indeed, the activities of his original company in Avignon were intertwined first with those of three other companies he had built in Firenze, in Prato, and in Pisa, and eventually had a 'company system' encompassing eight branches (or 'fondaci' as Datini called them): namely Avignon, Prato, Pisa, Firenze, Genova, Barcelona, Valenza, and Majorca. It appears that the idea of the multinational holding is therefore not as modern as we may think!

And so, it was in 1363 that Francesco Datini began keeping a meticulous archive

composed of different ledgers, books, and correspondences. According to the official catalog that can be accessed online at the website of the *Archivi Datini* (Istituto Datini, n.d.), Datini's collection contains 602 accounting ledgers, and 592 envelopes of correspondence, which in turn contain about 150,000 letters.

It is a fascinating exercise to see the nature of the accounting ledgers that are contained in the archive itself. In addition to the book of debtors and creditors, the archive contains a variety of different books, including a book of pledges (*Quaderno delle Ricordanze*, the word *Ricordanze* meaning "things to be remembered"), a postal book (containing a record of all the correspondence), a real estate book ("possession" being the Italian word to denote real estate), a book of insurances, a book of the cargos, one for the orders, one for cash expenditures made in *fiorini*, the currency of Firenze, one for currency exchanges, and many others. Clearly, Francesco Datini and his partners had put in place a very well managed organization, capable of coordinating very complex business transactions across a large swath of land.

It is no less interesting to look at the correspondence that is preserved in the archive. There are essentially three kind of letters that are available in the archive. The first being commercial correspondence, which shows the relationships between the Datini fondaci (branches) and the various entities they were working with. Next, the private and family correspondence (which offers a view of familiar life in Renaissance Italy), and finally the more technical and specialized correspondences that include pledges, checks, insurances, currency exchanges, and other commercial data, that were then recorded in the ledgers. Browsing through this material gives us an idea of how the deals were put together, before they would find their final destination in the ledgers.

Lessons from The Archive

The historians of economics, and especially those interested in the history of economic institutions, could probably spend years combing through the archives and seeking hidden gems that would allow a precise reconstruction of the complex web of connections that the early markets were founded upon.

But from our less specialized perspective, one can still draw some general conclusions that appear to challenge views that, if not necessarily accepted in the scholarly world, appear to have gained a certain amount of popular and media credence.

Let us begin with the idea of globalization, as a relatively recent trend that has brought the world together, and that has altered the livelihood of populations across the globe. While it is certainly true that globalization has accelerated at a furious pace, and while its impact (both positive and negative) cannot be overstated, even a cursory look at the Datini archives shows a well-developed and artfully managed global enterprise. While centered in Prato, the branches of the Datini enterprise reached to France and Spain, but in fact, when we look at the letters that are contained in the correspondences of the archive, we find that the commercial partners who were working with Datini were located in 267 towns both in Italy and abroad. Among such cities, one has an idea of the extent of the network by simply mentioning the names of Bristol, Lisbona, Safi, Mecca, Tana, Ragusa, and Nurenberg. The network of the Datini business was,

therefore, laid across most of Europe, as well as the Middle East.

How was such commerce possible? It is clear again by looking at the correspondence, that we are in the presence of a strong multicultural enterprise. While most modern commercial letters are written in English (or maybe in French), the letters in the Datini archive represent a variety of different languages. Many such languages are forms of Italian (at the time, as we pointed out earlier, Italian did not exist as a language per se, but rather as a collection of regional forms), predominantly in Vulgar Tuscan. But in addition to Italian, we find letters in Latin (still very much a live language at the time), Catalan, Castilian, Provençal, Arabic, and Hebrew.

The multicultural aspect of the archive is also reflected in the multiple currencies that appear in different documents. The issue of currency conversion (and of what can be deduced to be different rates of inflation) is clearly another important pressure point for the development of simple mathematical techniques.

In addition to the global nature of the business, and its multicultural aspects, we cannot avoid seeing the beginning of the creation of capitalism and free markets. It is clear, for example, that the perilous nature of commerce (by ship, with the double dangers of foul play, and natural disasters), forced the introduction of insurances as ways to mitigate risk. The way in which cargos were allocated on different ships offer another interesting viewpoint on risk mitigation, and again raise questions as to the kind of mathematics that was necessary (mostly what we would consider simple Algebra in modern terms, but that at the time was exceedingly complicated, mostly because of the lack of the appropriate symbolism). At the same time, issues regarding the ability to charge interest on loans (something that was not allowed within Islam or Christianity), pushed the creativity of the merchants.

And finally, the complex nature of the corporate structures that the Datini archive shows in what are denoted as 'secret books', which indeed contain what we would call articles of incorporation of the various partnerships, as well as corporate contracts, and secret negotiations (though, for some reason, the secret books are only available for the Avignon branch).

In conclusion, we believe the Datini archive shows a picture of a most fecund moment in the history of the Western World, the birth of a commercial era, and the way in which mathematics and economics became partners in a development that has proved extremely successful for both disciplines.

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— President James L. Doti, Fall Convocation Address, 1991



This display tells the story of the Doti Years and the man whose leadership, vision, and dedication made it all possible.



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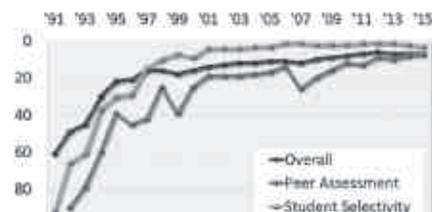


Dale E. Fowler School of Law
American Bar Association

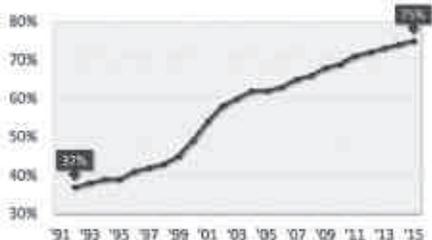
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1994 – Nadar Barookh	2003 – Lindi Kay Duesenberg	Jessica Pauletto
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1996 – Kristina Cordasco	2005 – Rene Bennett	2013 – Priyat Shah
Hieu Tran Pham	2006 – Ryan Van Ramshorst	2014 – Elliot Cooley
1997 – Robert Diaz	2007 – Jose Israel Pacheco	Adam Kalawi
1998 – Travis Osborne	2008 – Javetta A. Cartagena	2015 – Marissa Wong
1999 – Matthew Barcelona	Casey R. Wayland	2016 – Emily Frisch

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Amy Hanreddy



Ahmed Younis

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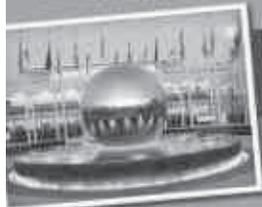
Mann Knott Studios, 2005



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- Winston Churchill



Liberty Plaza and the Berlin Wall, 1988



Faoury Artisian, Ph.D. Plaza, 2008



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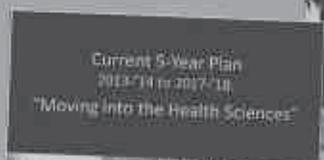


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Contributors

SHERYL A. BOURGEOIS

A seasoned development professional, Dr. Sheryl A. Bourgeois has 25 years of experience in fundraising, marketing, and strategic planning for non-profit and educational organizations. Currently Executive Vice President and Chief Advancement Officer for Chapman University in Orange, California, Dr. Bourgeois oversees all external affairs. Her award-winning team has been recognized with more than 80 honors in the fields of development, public relations, marketing, interactive and broadcast media, community relations, alumni affairs, and video and documentary design. During her tenure at Chapman, Dr. Bourgeois has advanced the mission of the institution by helping to increase the university's endowment by more than 50%, generating close to \$400 million in philanthropic support and raising its national ranking. Dr. Bourgeois earned her Bachelor of Arts in English from UCLA, and both her Masters and Ph.D. in higher education from the Claremont Graduate University (CGU). Her doctoral dissertation — *The Relationship Between Alumni Presence on the Governing Board and Institutional Support* — was the 2014 CASE-John Grenzebach Award for Outstanding Research in Philanthropy for Educational Advancement. Dr. Bourgeois has served as a presenter at numerous regional and national events. Her research interests include leadership, factors of high-performing educational institutions, and defining and advancing institutional cultures.

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Vincent Geloso obtained a Ph.D. in Economic History from the London School of Economics. He is also a postdoctoral fellow in economics at Texas Tech University in Lubbock, Texas. He has published articles in various academic journals including the *Journal of Population Research*, *Essays in Economic and Business History* and *Economic Affairs*.

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Cristina M. Giannantonio is an Associate Professor of Management in the Argyros School of Business and Economics at Chapman University. She is also an Associate at the Thompson Policy Institute on Disability and Autism at Chapman University. She served as the 2015-16 President of the Chapman University Faculty Senate. She received her Ph.D. from the Smith School of Business at the University of Maryland in College Park, Maryland. Dr. Giannantonio's research interests include extreme leadership, image norms, and high-tech entrepreneurial careers. Her research has been published in academic journals, including the *Journal of Management*, *Personnel Psychology*, and *The Journal of Business Leadership*. She is the co-editor of the *Journal of Business and Management*. In 2012, Drs. Giannantonio and Hurley-Hanson's Academy of Management Symposium *Staying Hungry, Staying Foolish: Academic Reflections of the Life and Career of Steve Jobs* was designated an AOM Showcase Symposium. Dr. Giannantonio and Dr. Hurley-Hanson's book *Extreme Leadership: Leaders, Teams and Situations Outside the Norm* was published by Edward Elgar Publishing in 2014.

The book is part of the New Horizons in Leadership Studies series. *Extreme Leadership* was selected as a finalist for the 2014 Outstanding Leadership Book Award by the Department of Leadership Studies at the University of San Diego.

DANIEL GIEDEMAN

Daniel Giedeman is Professor of Economics in the Seidman College of Business at Grand Valley State University and the current Chairman of the Board of Trustees for the Economic and Business History Society (EBHS). Professor Giedeman studied economics and history as an undergraduate at Southern Illinois University before earning his Ph.D. in Economics from Washington University in St. Louis. His research interests include banking — particularly how banking may have influenced economic development — the determinants of long-run economic growth, economic inequality, and economic history. He also has an interest in comparing the economic systems of different nations and spent a year as a visiting professor at the University of Konstanz in Germany. In addition to the EBHS, Dr. Giedeman is also a member of several economic organizations including the American Economic Association.

MICHAEL GOU

Michael Gou's primary research focuses on studying economic history to answer policy relevant questions pertaining to financial regulation. His current work focuses on studying the impact of bank capital requirements on the financial system in the early 20th century United States. Capital requirements are often times challenging to study since changes in capital requirements are often times endogenous responses to ongoing economic events such as financial crises. Studying the financial system in the early 20th century United States has allowed him to overcome these obstacles by employing advanced econometric methods and quasi-experimental techniques. Gou's research highlights the importance of studying the historical structure of the United States financial system in order to examine the effect of capital requirements on the stability of the financial system.

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Amy E. Hurley-Hanson is an Associate Professor of Management in the George L. Argyros School of Business and Economics at Chapman University. She is also an Associate at the Thompson Policy Institute on Disability and Autism at Chapman University. She received her Ph.D. in Management from the Stern School of Business at New York University. She is the co-editor of the recent book *Extreme Leadership: Leaders, Teams and Situations Outside the Norm*. She is also the co-editor of the *Journal of Business and Management*. Dr. Hurley-Hanson was chosen as an Ascendant Scholar in 2000 by the Western Academy of Management. In 2008 Drs. Hurley-Hanson and Giannantonio received the Best Symposium Award from the Management and Education Division of the Academy of Management. Her areas of research are organizational decision making, image norms, high tech entrepreneurial careers, and the application of behavioral decision theory to strategic aspects of executive succession. Her work on these topics has appeared in numerous journals including the *Journal of Vocational Behavior*, *Journal of Applied Psychology*, *Women in Management Review*, *Journal of Organizational*

Behavior, Group and Organization Management, Journal of Leadership and Organization Development, Organizational Dynamics, and the Journal of Psychology. She was selected as a Research Fellow at the Center for Leadership and Career Studies at the Goizueta Business School of Emory University.

DAVID A. JANES

David Janes is Chairman of Janes Capital Partners (JCP), an investment banking firm specializing in Aerospace and Defense mergers and acquisitions. Mr. Janes was previously the CEO of California Manufacturing Enterprises, an aircraft parts manufacturing company he cofounded in 1977. During his business career, Mr. Janes stayed active in the Naval Reserve and retired as a two-star admiral. Over his 36 years of service, he held numerous commands, including his most recent assignment as Commander Military Sealift Pacific and Far East. He also served as Special Assistant to the Director of the Naval Reserve for Nationwide Automation of Reserve Personnel Management. Mr. Janes and his wife, Donna, have been ardent supporters of Chapman University for more than 15 years, providing support for the Chapman Fund and the annual American Celebration gala, including serving as co-chairs of this event in 2009. Mr. Janes has served as chairman of Chapman's Board of Trustees since February 2015 and on the Board of Counselors of the Argyros School of Business and Economics, where he helped to establish the Janes Financial Center and the Donna and David Janes Endowed Chair in Experimental Economics. He is also Chairman of the Board of Regents of Brandman University.

MARK CHAPIN JOHNSON

Mark Chapin Johnson is a Chapman University and Claremont Graduate University Trustee, and Hoover Institution Overseer. He is also a Wilkinson College Adjunct Professor of Political Science at Chapman University, instructing with a focus on the Founders, the Constitution, Federal Policy formation, and for fun, the comparative politics of the Middle East. He is an entrepreneur, businessman and CEO who has founded and managed national businesses in the pharmaceutical and real estate industries, as well as community charitable organizations until his middle years, when Jim Doti encouraged him to attend college. That seminal mentoring led to a complete life transformation resulting in 3 degrees over 10 years and an exit from the business world. There was no amount of financial success or commercial achievement that ever compared to the reward of learning that Jim Doti ignited in Professor Johnson. The journey of developing true critical thinking skills and now teaching in Chapman University classrooms is the pinnacle of a life well and fully lived — with much credit to the Dotis. The article he wrote for this special issue is a small token of enormous appreciation for their friendship and encouragement over several decades.

ANJA KRUSLIN

Anja Kruslin, born February 3, 1994 in Tuzla, Bosnia and Hercegovina, moved to California with her parents as a refugee in 1995. Anja has always had an interest in a variety of subjects and struggled to select only one, ultimately choosing to complete a degree in Business Administration at Chapman University in an effort to be able to

apply her knowledge to various industries and have the opportunity to make decisions geared towards creating productive growth and change in society. She hopes her contribution to the article contained in this issue will inspire people to cultivate even more consideration for the effects of our actions and beliefs as individuals to those around us in the midst of globalization.

DWIGHT R. LEE

Professor Lee received his Ph.D. from the University of California, San Diego in 1972. He has had full-time tenured faculty appointments at the University of Colorado, Virginia Tech University, George Mason University, and the University of Georgia where he was the Ramsey Professor of Economics and Private Enterprise from 1985-2008. He was the William J. O'Neil Professor of Global Markets and Freedom at Southern Methodist University in Dallas from 2008-2014 and remains affiliated with the O'Neil Center for Global Markets and Freedom as a Senior Fellow. His research has covered a variety of areas including the economics of the environment and natural resources, the economics of public choice, public finance, and labor economics. Professor Lee has published 162 articles in refereed journals, 289 articles and commentaries in magazines and newspapers, 52 chapters in books, 38 book reviews, 9 lectures at universities and conferences throughout the United States as well as in Europe, Central America, South America, Asia, and Africa. He served as President of the Association of Private Enterprise Education from 1994-95 and as President of the Southern Economic Association from 1997-98.

CHUCK MARTIN

Charles "Chuck" Martin has served as a Trustee of Chapman for 28 years. He and his wife Twyla, recruited Larry and Kristina Dodge to Chapman's film school, ultimately resulting in its naming gift. Both chaired the opening gala for the Dodge College and the American Celebration. Mr. Martin has also had a distinguished career as an investor. He was the founder and managing partner of Enterprise Partners, a venture capital firm that grew to be one of the top firms in America. He also founded and managed Westar Capital, an enormously successful private equity firm in partnership with George Argyros. For 25 years, he co-owned TEC International, a membership program for CEOs that grew to 12,000 members world-wide. Chuck and his wife are active philanthropists, focusing on the arts and higher education. Mr. Martin led the formation of the Orange County Museum of Art and served as its first Chairman. He has served on the Investment Committee for the University of California, Regents for 12 years and has served as a Trustee of UCI for 15 years. Mr. Martin has authored 6 books and is a 1960 graduate of The Ohio State University with five majors.

VERNON SMITH

Dr. Vernon L. Smith was awarded the Nobel Prize in Economic Sciences in 2002 for his groundbreaking work in experimental economics. Dr. Smith has joint appointments with the Argyros School of Business & Economics and the Fowler School of Law, and is part of a team that created and runs the Economic Science Institute at Chapman. Dr. Smith has authored or co-authored more than 250 articles and books on capital

theory, finance, natural resource economics and experimental economics. His previous faculty appointments include George Mason University, where he was a Professor of Economics and Law prior to joining the faculty at Chapman University. Dr. Smith has been a Ford Foundation Fellow, Fellow of the Center for Advanced Study in the Behavioral Sciences, a Sherman Fairchild Distinguished Scholar at the California Institute of Technology as well as a distinguished fellow of the American Economic Association, an Andersen Consulting Professor of the Year, and the 1995 Adam Smith Award recipient. He was elected a member of the National Academy of Sciences in 1995, and received CalTech's distinguished alumni award in 1996. He has served as a consultant on the privatization of electric power in Australia and New Zealand and participated in numerous private and public discussions of energy deregulation in the United States. In 1997 he served as a Blue Ribbon Panel Member, National Electric Reliability Council.

DANIELE C. STRUPPA

Daniele C. Struppa will be, as of September 1st, the 13th President of Chapman University. A mathematician whose field of expertise is in Fourier Analysis and its applications, he received his Ph.D. from the University of Maryland in 1981, and is the author of more than 200 peer-reviewed publications in mathematics, physics, and engineering, including 8 books. He also holds three patents. Before becoming the President of Chapman, he was the Chair of the Department of Mathematical Sciences at George Mason University, the Dean of the College of Arts and Sciences at George Mason University, and finally, the Chancellor at Chapman University.

JASON E. TAYLOR

Jason E. Taylor is Professor of Economics at Central Michigan University and Editor-In-Chief of *Essays in Economic & Business History*. Taylor is an authority on 20th century economic history in the United States, particularly the Great Depression and World War II, and how these historical episodes relate to cartel, labor, and public choice theory. Taylor has published in *The Journal of Law and Economics*, *Journal of Economic History*, *Public Choice*, *Economica*, *Journal of Institutional and Theoretical Economics*, *American Economic Review* (Papers and Proceedings), *Southern Economic Journal*, *Journal of Industrial Economics*, and *Explorations in Economic History* among others. He has published editorials in *Forbes*, *Wall Street Journal*, *USA Today*, and the *Detroit News*, and has testified on the findings of his research before Congress.

JANICE TRAFLET

Janice Traflet is Associate Professor and Howard I. Scott Research Professor of Management at Bucknell University in Lewisburg, PA. A member of EBHS since 2004, Traflet has served the organization in various capacities, including as a trustee and as former editor of the journal of *Essays in Economic & Business History*. Active in the field of stock market history, she is author of the book *Nation of Small Shareowners* as well as numerous articles. She has won several awards, such as the James Soltow Prize, an Alfred Chandler Fellowship, and a Rovensky Fellowship in Business and Economic History.

RICHARD VEDDER

Richard Vedder is Distinguished Professor of Economics Emeritus at Ohio University, Director of the Center for College Affordability and Productivity, and an Adjunct Scholar at the American Enterprise Institute. He graduated from Northwestern University and has a Ph.D. from the University of Illinois. In addition to Ohio University, He has been on the faculty at the University of Colorado, Claremont McKenna College in California, and Washington University in St. Louis. An economic historian by training, Vedder has authored over 200 scholarly papers and several books, including *The American Economy in Historical Perspective*, *Unemployment and Government in Twentieth Century America* (with Lowell Gallaway), *The Wal-Mart Revolution* (with Wendell Cox), and *Going Broke by Degree: Why College Costs Too Much*. He writes extensively in the popular press, including *The Wall Street Journal*, *New York Times*, *Washington Post*, *Investor's Business Daily*, *Forbes*, and *The National Review*.

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