

Managing, and Managing Oneself, in an Age of Information Inequality: Lessons from Peter Drucker

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Digital technology is often conceived of as a “great equalizer”¹—a significant means of economic development and reducing inequality. Many of today’s leading companies are pursuing projects built on foundations of this premise.² Google’s Project Loon, for example, promises to bring Internet to the two-thirds of the world population without access through a network of balloons in the stratosphere. The balloons will enable connection from phones and other LTE devices. Project Loon’s introduction video, narrated by a young girl, communicates Google’s economic goal in a final point: “And because small businesses that are on the Internet grow twice as fast, everyone could create new opportunities for everyone”.³



Google likely derived this statistic from a report published in May 2011 by the McKinsey Global Institute titled “Internet matters: The Net’s sweeping impact on growth, jobs, and

¹ As of this writing, a Google search for the term “technology great equalizer” turns up in the first five results articles and blog posts published by Business Insider, the White House, Living Cities, and the Association for Talent Development in which the ability of technology to level society is assumed.

² Google’s Project Loon, examined in this essay, and the Facebook-led partnership Internet.org are notable examples.

³ “What is loon?”, Google, accessed July 15, 2015, <http://www.google.com/loon>.

prosperity”. The authors of this report conducted an analysis of France’s economy and found that over the 15 year period leading up to 2011 the Internet created 1.2 million jobs and destroyed 500,000 others, creating a net 700,000 jobs or 2.4 for every one destroyed.⁴ The authors also surveyed 4,800 small and medium-sized enterprises across 12 countries⁵ and found that, on average, the Internet created 2.6 jobs for every one destroyed.⁶ McKinsey’s conclusion: “The Internet is a powerful catalyst for job creation”.⁷ While the firm’s analysis shows that the Internet can drive economic growth, McKinsey’s statistics do not begin to tell the story of who is gaining and who is not.

The Digital Age, driven by the Internet as a disrupter or “disorganizer”,⁸ a term foresightedly coined by Peter Drucker almost 50 years ago, has made information more accessible than it has ever been before. Access, however, does not mean equal economic gain, let alone a normal distribution of gain. Those with more gain more. Those with less gain less, and sometimes not at all. Jane Margolis, a senior researcher at the University of California, Los Angeles and author of the pivotal book *Stuck in the Shallow End: Education, Race, and Computing*, calls this disparity “virtual segregation”.⁹ Margolis goes on to define virtual segregation as “an insidious phenomenon that occurs when we are led to believe that we are moving toward equality, and pretend that everyone has a chance and a choice”.¹⁰ Jon Gosier, a TED Fellow and technology investor, more humorously calls this phenomenon “trickle-down techonomics”.¹¹

⁴ Matthieu Pélissié du Rausas, James Manyika, Eric Hazan, Jacques Bughin, Michael Chui, and Rémi Said, “Internet matters: The Net’s sweeping impact on growth, jobs, and prosperity”, McKinsey Global Institute, May 2011, 3.

⁵ McKinsey defined small and medium-sized enterprises as those with less than 250 employees and annual revenue of less than €250 million. The 12 countries were Canada, China, France, Germany, India, Italy, Japan, Russia, South Korea, Sweden, the United Kingdom, and the United States.

⁶ Pélissié du Rausas, Manyika, Hazan, Bughin, Chui, and Said, “Internet Matters”, 3.

⁷ Ibid.

⁸ Peter F. Drucker, *The Effective Executive: The Definitive Guide to Getting the Right Things Done* (New York: HarperCollins, 1967), 117.

⁹ Jane Margolis, *Stuck in the Shallow End: Education, Race, and Computing* (Cambridge: MIT Press, 2008), 2.

¹⁰ Ibid.

¹¹ Jon Gosier, “The problem with ‘trickle-down techonomics’”, TEDGlobal, October 2014, https://www.ted.com/talks/jon_gosier_the_problem_with_trickle_down_techonomics.



Gosier continues:

We tend to think that if we design things for the select few, eventually those technologies will reach everyone. And that's not always the case. Technology and innovation behave a lot like wealth—capital. They tend to consolidate in the hands of the few. And sometimes they find their way out into the hands of the many.¹²

Information inequality is the greatest challenge to managing, and managing oneself, in the Digital Age. Knowledge workers, whether they manage people, projects, processes, and/or budgets, must possess a fundamental understanding of the digitally-driven economy in order to empower themselves, their colleagues, their direct reports, and, ultimately, their business or organization.

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I first encountered Peter Drucker's works as an undergraduate student at Pace University in New York. In my final year at Pace, I taught front-end web development at the university's walk-in tutoring center and my methodology, and the perspective I shared with students, was rooted in Drucker's approach to entrepreneurship. It was also at this tutoring center that I first witnessed the digital divide—information inequality.

I have been interested in technology since I was a child. I remember asking the librarian at my elementary school for books on the "green stuff in machines, like VCRs" and spending hours looking at pictures of electronic circuits. I was fascinated by their form and eager to know their function. There was no mission driving my interest in technology. I was simply curious. I took (and continue to take) great joy in finding the limitations of a tool, my limitations as a wielder, and then pushing both. I first had regular access to a computer at 10 years old, a secondhand IBM desktop running Windows 3.1. A year later, my family bought an HP desktop

¹² Ibid.

boasting an Intel Pentium processor, Windows 95, and an internal dial-up modem. A trip to the local bookstore and an AOL installation disc later, I was online. The Internet became a place of fascination for me, a place to explore all sorts of obscure interests, and a creative medium. I taught myself to write markup and to script. I played. I broke things (mostly my own things). And I assumed that most people had experiences with technology similar to my own.

The tutoring center quickly taught me otherwise. I had the privilege to teach a wide range of students with an even wider range of questions. The first half of the students who visited the center needed concepts explained in a way that was comprehensible to them, the opportunity to practice coding, and live feedback. A few students who visited had dabbled in markup, wanted to solidify their understanding, and dig deeper into front-end development. The second half of the students who visited the center had trouble with fundamental computing—navigating an operating system and using word processing software. A few were essentially computer illiterate. This was both puzzling and distressing to me. I was the same age as the large majority of my tutees. Were we not Millennials? Were we not “digital natives”?¹³

My learning of front-end programming languages was driven by an intrinsic interest. Thus, when I would try to create a website, I never gave much thought to the many times that my layout would not display properly and the many more times that my script would not work. Without knowing it, I was applying Peter Drucker’s conception of entrepreneurship to my learning. In the original, 1984 preface to *Innovation and Entrepreneurship*, Drucker wrote: “Entrepreneurship is neither a science nor an art. It is a practice.”¹⁴ When I first read these two brief sentences at 21 years old, I interpreted them in the context of the etymology of the word “entrepreneur”. If one considers the French root *entrepren-* or verb *entreprendre* (to undertake), then an entrepreneur is directly “one who undertakes (something)”. A student who systematically undertakes the learning of front-end development (or any other subject for that matter), and in the process creates a new or different understanding within themselves, is an entrepreneur or, to invent a term, “autoentrepreneur”.

This is the perspective I shared with my tutees. Drucker’s work led me to believe that an entrepreneurial approach to learning could lead to deep understanding—an assumed, if not natural, curiosity and the opportunity to make mistakes¹⁵ in the pursuit of self-innovation. I was able to put this belief into practice at Pace’s tutoring center and found it to be an effective teaching methodology. I also found that a student’s knowledge at the outset of our time together would often determine their understanding at the conclusion, and observed a positive correlation between initial knowledge and economic status (i.e., initial knowledge was greater in students with, or from families with, more wealth). Over the next few years, I observed this same trend in

¹³ “Millennials in Adulthood”, Pew Research Center, March 7, 2014, <http://www.pewsocialtrends.org/2014/03/07/millennials-in-adulthood>.

¹⁴ Peter F. Drucker, *Innovation and Entrepreneurship: Practice and Principles* (New York: HarperCollins, 1985), vii.

¹⁵ As a tutor, I came to relish mistakes. The more mistakes a tutee made, the more novel learning there was to be had.

the workplace, across industries and organizations, and it steadily became clear to me that the nature of today's digitally-driven economy is fundamentally different than the nature of any economy that has come before it.

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In the final chapter of *Management Challenges for the 21st Century*, titled “Managing Oneself”, Peter Drucker encourages the knowledge worker to ask the question, “What is my contribution?” or “What *should* I contribute?” He also highlights how unique this question is in human history:

Traditionally, the task was given. It was given either by the work itself—as was the task of the peasant or the artisan. Or it was given by a master or mistress, as was the task of the domestic servant. And, until very recently, it was taken for granted that most people were subordinates who did as they were told.¹⁶

In feudal and mercantile economies, there was no need for a person to know their contribution or competitive advantage, practice it, and develop it. A peasant would begin work as a farmer and end work as a farmer. An artisan would begin work as an apprentice, know their craft in three to seven years time, and end work as a journeyman or master craftsman. There was no significant global, or even domestic, competition as there was no practical means of moving goods and labor.

In the second half of the 18th century and first half of the 19th, the First Industrial Revolution, the appearance of mechanized rail transport systems (i.e., steam locomotives) in England, and the expansion of industrial economies and railroads across Europe, and the world, turned feudal-mercantile existence on its head. A person could, if they so desired, move to a city and find work in a new kind of organization—the factory. As a system of production, the factory markedly increased the quantity and quality of output through automation, the division of labor, and specialization of function. Each step in the production process was broken into smaller, quickly learned sub-steps. A worker no longer needed to spend years honing their craft, or have a craft at all. There was also no incentive for factories to employ workers who no longer met the needs of production, as there was little or nothing one worker did that another worker could not do or learn to do. Workers were exceptionally vulnerable to changes in the market.

Then, in the second half of the 20th century, “like the steam engine during the First Industrial Revolution”, information and communications technology “completely changed the way society organizes its economic activity”.¹⁷ Today, through digital services, systems, and technology, knowledge workers are able to search for, mine through, retrieve, and share

¹⁶ Peter F. Drucker, *Management Challenges for the 21st Century* (New York: HarperCollins, 1999), 180.

¹⁷ Mathias Humbert, “Technology and Workforce: Comparison between the Information Revolution and the Industrial Revolution” (paper for course Info 210: The Information and Services Economy at EECS graduate school, University of California, Berkeley, 2007).

information that increases the effectiveness, efficiency, and scale of production and the provision of output. Jon Gosier, referenced earlier, spoke about the consolidation of technology in the hands of the few. While digital technology is an important means of data transfer, the disparity Gosier references is better framed as the consolidation of *information* in the hands of the few—knowledge and understanding.¹⁸ As a knowledge worker’s chief asset, information returns value differently than the crafts and practices of the feudal, mercantile, and industrial economies of centuries past. Information compounds.

A bakery apprentice would reach a point of mastery. They would continue to improve throughout their life, but with diminishing returns. A bakery master craftsman would have no mobility (i.e., a baker could not change occupations and become a mechanic).

A factory worker would reach a point of mastery in a sub-step of production, a practice. They may have continued to improve throughout their life, if the production process remained the same over time, but with diminishing returns. A factory worker would have great mobility, and vulnerability, because they would have been unbound to a craft and quickly able to learn new practices.

A knowledge worker will reach a point of mastery in many subjects and one or two disciplines, but will never have a complete mastery of all knowledge. A knowledge worker will continue to improve throughout their life, with compounding returns. A knowledge worker will analyze, synthesize, and apply a wide range of information to their frameworks for understanding—there is only gain to be had and nothing unworthy of exploration. A knowledge worker will have considerable mobility because, as they develop over the course of their career, they will continually outgrow their employment and require lateral, if not up upward, movement to a new team, department, or organization in order to return to a balanced and mutually beneficial exchange.

It is the compounding of information, and the value it returns to knowledge workers, that defines the nature of the present economy. It is also this compounding that has exacerbated information inequality and presents managers with their greatest challenge. As a tutor, I observed that a student’s knowledge at the outset of our time together often determined their understanding at the conclusion. This was the result of students having no initial principal—no framework for understanding computer information systems—on which subsequent knowledge could compound. At the tutoring center and in the workplace, I observed a positive correlation between initial knowledge and economic status. This was the result of students and colleagues with less wealth having fewer tools and, consequently, those with fewer tools having little and sometimes no opportunity to develop an initial principal. Drucker’s systematic approach to

¹⁸ I prefer the expression “Information Age” to “Digital Age” because, while digital technology is the medium that enables near-instantaneous communication, there was a lesser proliferation (in scale, but not importance) of information through library expansion in the first half of the 20th century—much of it driven by Scottish-American businessman and philanthropist Andrew Carnegie. In short, the Information Revolution began decades before the widespread use of digital technology.

contribution, interpreted in the context of the digitally-driven economy, can provide knowledge workers with strategies to manage in an age of information inequality.

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Peter Drucker wrote about contribution in the pursuit of professional effectiveness, self-fulfillment, and success:

The decision “What should my contribution be?” thus balances three elements. First comes the question: “What does the *situation* require?” Then comes the question: “How could *I* make the greatest *contribution* with my strengths, my way of performing, my values, to what needs to be done?” Finally, there is the question: “What *results* have to be achieved to make a difference?”¹⁹

The compounding of information in the digitally-driven economy has resulted in Drucker’s approach to contribution appreciating in value and relevance since *Management Challenges* was first published. Take, for example, the aforementioned mobility of knowledge workers: In the United States, the median employee tenure for all wage and salary workers is 4.6 years and the median employee tenure for young people, workers ages 25 to 34, is 3 years.²⁰ Knowledge workers who are managing people should expect from the outset that their direct reports will move laterally, if not upwards, in a few years time. Thus, in order to maximize the value of *de facto* provisional exchanges, it is crucial that knowledge workers—both managers and direct reports—systematically empower in each other the recognition, practice, and development of their greatest ways of contribution.

During my time in the workplace I have experienced both the boon of empowerment and the bane of denial, relative to contribution. When empowered, I have been able to apply my contribution or competitive advantage—strategy, production, writing, editing, and relationship management—to the needs, and unforeseen needs, of my employer. Likewise, I have been able to empower the people to whom I directly report, and my colleagues, through an understanding of each situation that arises, what exactly it is that I can contribute, and the results required to achieve a favorable outcome. When denied, however, no matter how hard I have worked to meet the needs of my employer, my contribution has been misapplied, poorly applied, or not applied at all. In this case, regardless of the poison picked, both the organization and I have suffered.

¹⁹ Drucker, *Management Challenges*, 181.

²⁰ “Employee Tenure Summary”, Bureau of Labor Statistics, September 18, 2014, <http://www.bls.gov/news.release/tenure.nr0.htm>.

Knowledge workers can do this by implementing strategies that level information inequality and encourage the compounding of knowledge and understanding. In Google's "2004 Founders' IPO Letter", Larry Page and Sergey Brin wrote about a management philosophy they call "20 Percent Time":

We encourage our employees, in addition to their regular projects, to spend 20% of their time working on what they think will most benefit Google. This empowers them to be more creative and innovative. Many of our significant advances have happened in this manner. For example, AdSense for content and Google News were both prototyped in "20% time". Most risky projects fizzle, often teaching us something. Others succeed and become attractive businesses.²¹

As an overarching management strategy, 20 Percent Time comes up short.²² The underlying idea, however, can have immense impact if applied on the project level.

Email marketing makes for a digestible example. When done well, email campaigns require a fundamental understanding of writing and editing, layout, graphic design, recipient list creation and segmentation, digital analytics, and, in the U.S., national regulations affecting the sending of commercial email.²³ In my work in communications and digital media, I have had the opportunity to manage many email campaign projects involving multiple team members and stakeholders. The most successful projects, in terms of audience reception and engagement, have all shared one common characteristic: A planned effort to challenge the *status quo* through the pursuit of contribution at the concept phase. Instead of creating three slight variations of an email campaign, the team would create two variations and a third, unconstrained concept that they thought would best accomplish project goals. In the process, and regardless of which concept gets the "go", the team fills gaps in individual understanding, levels information inequality, and challenges itself to do and deliver better work. This strategy is reasonable in terms of time commitment and replicable across projects and organizations.

Peter Drucker's works have helped me develop an understanding, one that continues to evolve with the presentation of new information, of what I have observed and experienced as a knowledge worker, manager, and young professional. Digital technology and the Internet, now a defining feature of development, can drive economic growth. The Digital Age also brings with it the challenge of information inequality. Drucker's ideas, interpreted and applied, can provide knowledge workers with strategies to manage this challenge (this section covered just one). There remain, however, a significant number of people, including young people, who have trouble with fundamental computing or, worse yet, are computer illiterate. These people are often

²¹ Larry Page and Sergey Brin, "2004 Founders' IPO Letter", Google, accessed July 15, 2015, <http://investor.google.com/corporate/2004/ipo-founders-letter.html>.

²² See Jillian D'Onfro, "The truth about Google's famous '20% time' policy", Business Insider, April 17, 2015, <http://www.businessinsider.com/google-20-percent-time-policy-2015-4>.

²³ See the CAN-SPAM Act of 2003.

lost to the digitally-driven workplace because they can seldom get a foot in the door. And this remains the greatest challenge to *society* in the Digital Age.