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Clifford M. Gross

Too Good To Fail

Creating Marketplace Value
from the World's Brightest Minds

 Springer

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*For Marielle, Harrison, Bradley, Linda
and Ilyse*

Preface

This small volume would not have been written had I not decided to return to school to freshen-up my thinking after several years in business and academia. To this end, I am indebted to my Professors and colleagues at Oxford's Saïd Business School; where many inspirational lectures and after-class discussions provided the basis for annealing my thoughts on technology transfer through the lens of network strategies, open innovation, and design thinking. On this note, special thanks are due to Professors Marc Ventresca, Sue Dopson, and Lucy Kimbell whose lectures on strategy and innovation, management and design thinking respectively, provided an illuminating reference frame from which to view many of my past experiences, both the failures and the successes.

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Contents

1	Open Innovation and Intellectual Capital	1
	Intellectual Capital: The World's Most Valuable Asset Class	1
	Cold Trends and How Markets for Natural Ice Emerged in the Nineteenth Century US	2
	Bright Spots in Solar Energy	3
	Photovoltaic Market Disruption and Value Creation	5
	Creative Destruction	7
	The Take Away	9
	References	9
2	The Technology Transfer Ecosystem	11
	Assessment of Technology, Market, and Organizational Capabilities.	12
	The Patent Office	12
	The Small Public Company	14
	Technology Transfer: The Supplier Network	17
	The Technology Transfer Firm	19
	Technology Transfer Competitive Landscape	20
	Networks and the Nascent Technology Transfer Market.	23
	U.S. Patents: A Case for Innovation and Job Creation	24
	Increasing the Vitality of the Small Cap Public Marketplace	25
	Technology.	29
	Market	30
	Organization	30
	References	31
3	Intellectual Capital: The World's Fastest Growing Asset Class	33
	US Patents as the Source of Innovation and Job Creation.	37
	Small Cap Market Failure in the US IPO Market	39
	IPOs and Job Creation	41

Commercializing Research	41
TFP and Patent Applications Between 1948 and 2009	42
References	44
4 Network Strategies for Growing Emerging Markets	47
A Brief Example from Technology Transfer	48
The University Technology Supplier Network	49
References	51
5 The Role of Design in Bringing Innovation to the Marketplace	53
Implications for Companies	54
Commentary on Design's Role in the World	54
3M (Where Design is the Innovation)	57
Bang & Olufsen (Where Design Exists Primarily Without Technological Innovation)	58
Tesla Motors (Where Design is the Package Around Innovation)	60
Dyson (Where Designing New Metaphors for Traditional Products is the Competitive Advantage)	61
References	62
6 Leadership Required for Embracing New Technologies	65
The Impact of CEO's and Employees on Organizational Culture	65
Not Only the Good Die Young	65
Leveraging Free Will: A Necessary Tool for Changing Organizational Culture	66
Social Engineering Applied to Corporate Culture	67
Can Leadership Inspired by and Receptive to Technological Innovation Reshape Organizational Culture?	69
Theoretical Models for Organizational Culture: More is Less	72
References	74
7 The Growth of China's Technology Transfer Industry	77
The U.S. University Technology Transfer Market	82
Venture Capital	85
The IPO Market	86
The Chinese University Technology Transfer Market	88
The Technology Transfer Ecosystem	92
China's Venture Capital Marketplace	92
China's IPO Market Place	93
University Technology Transfer Marketplace: Growth Over the Next Decade	94
Implications for Global Markets	98

Contents	xi
Problems with the Nascent Technology Transfer Market	103
References	106
8 Erratum to: Intellectual Capital: The World's Fastest Growing Asset Class	E1
About the Author	109
Index	111

Introduction

The empires of the future are the empires of the mind.

Winston Churchill¹

Innovation results in the development of new technologies and business models to improve the world around us. From faster chips, the more efficient conversion of sunlight to electricity and better ways to diagnosis and treat diseases, innovation describes the inexorable improvement in the application of science and technology to enhance the quality of life and create lasting value. The myth of the \$538 garage entrepreneur has since David Packard and a few other outliers, given way to long term, significant research infrastructure of university laboratories staffed with scientists, physicians, and engineers envisioning generation 2.0 of the current state of the art. While many companies have significant research and development facilities, most corporate R&D efforts are mainly D, or the improvement or application of the existing science and technology to enhance the design of products and services. The big research or the R in R&D is more often than not conducted at the major research universities and government-operated research laboratories. For these off-market or exogenous sources of innovation to be useful, they must be transferred to the companies that can commercialize them. Enter technology transfer and open innovation. Technology transfer is as the name implies, the art and science of relocation of pure research led innovation to commercial enterprises. It is a difficult, inefficient business due to the inherent mismatch in motivation and direction. Basic research pursues big ideas that can potentially address the major questions facing a particular field of inquiry, technology push if you will, whereas companies in one form or another are selling solutions to their customers. These solutions are in constant need of technological advancement to improve their efficacy and cost-effectiveness in solving customer problems. Technology is pulled from exogenous and local sources to inform these solutions. Technology transfer sits at the intersection of technology push and market pull. Historically, this mismatch was a fairly local phenomenon, with universities and research labs in rough proximity to corporate enterprises

¹ Sir Winston Churchill, Speech at Harvard University, September 6, 1943.

providing the lion's share of new discoveries to invigorate their corporate neighbors. The Internet changed the playing field by redefining local to global. Social media changed it again by interconnecting all sources of innovation to every point in the network. What was once exogenous and foreign has become ubiquitous, global and familiar. Strictly speaking, for companies there is only one major source of research, the global network of all research laboratories; most of which are located in universities. While this has simplified and scaled-up the supplier network, it has done nothing to address stress riser between technology push and market pull and the difficulty of getting these new discoveries to market.

Professor Henry Chesbrough coined the term Open Innovation in 2003, recognizing that for companies to be consistent innovators they would need to source new developments outside their four walls and apply their development competence to deliver them to their customers. The limited, controlled internal corporate R&D facility, exemplified by Bell Labs of old, was an endangered if not extinct species. Owning the majority of the bright minds in any field was no longer possible. Alan Lafley, P&G's former CEO and Chairman said it well "for every smart scientists we have in-house, there are approximately 200 equally smart scientists worldwide, toiling in the same exact discipline," hence, the need to be open to innovations that are developed outside your organization. Lafley ate his own cooking by establishing Connect and Develop at P&G to identify and acquire external developed innovations. It was a very good meal, doubling the market capitalization of P&G between 2000 and 2010; a seemingly impossible job a priori.

The next paradigm for accelerating the growth of companies is the convergence of global university innovation networks, not dissimilar from the Gaia Hypothesis, to provide consistent external innovation to business. This is of course easier said than done as universities and business are cut from different cloths and there are few tools and companies to facilitate transactions. As a result, world wide, approximately 80 % of university discoveries go un-licensed. These unutilized discoveries represent the fruits from some of world's brightest scientists, engineers, and physicians. Nature may abhor a vacuum, but she hates waste and routinely deselects it. For business to evolve, it must develop ways to consistently harness the scientific potential energy of the great universities of the world, whose discoveries are simply too good to fail. The improved productivity of companies and nations depends on it.