

Creativity and Innovation

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A New Theory of Ideas

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Preface

It is safe to assume, since you are reading this book, that you share with us an interest in understanding how ideas work. There are a great many very good questions one could ask about ideas: Where do ideas *really* come from? Why is it that ideas seem to come differently to some people? What does the process of innovation *look* like? What are the features of an idea's *context* that actually matter? What, in actual fact, is creativity?

Perhaps an equally good question might be: There are, after all, many excellent books one can read on these topics, so why write another? Let us answer this last charge first.

While it is indeed true that one can read a variety of books on the topics that concerns us here, our objective was to write a book that proposes a simple and intuitive theory—a useful mental model—that one can keep in the back of their mind when thinking about ideas, regardless of what aspect of ideas interests them. We think there is immense value in having a common platform that we can all share in thinking about ideas, whether we are poets, business managers, physicists, artificial intelligence systems designers, or athletes.

If you think, much as both of us did at the outset of writing this book, that a theory of this immense ambition is entirely impossible, futile even, your misgivings would indeed not be ill-guided. How, after all, can anyone possibly propose a ‘theory’ about ideas—let alone *all* ideas—in the space of a relatively short book that remains accessible to *everyone* who has any interest in ideas?

We struggled mightily with this question, and especially about the generality and accessibility we sought for the overall theory, but decided in the end that the task was necessary enough to warrant attempting, particularly since we felt that our theory held the potential for achieving what we saw as its objective.

We live in a world of exponentially increasing ideas, and the stakes are simply too high to not have some basis for a common understanding for how ideas work.

Toward a Universal Law

Let us set the mark for the broad subject matter of this book by considering the message from a famous letter that Thomas Jefferson wrote in 1813 (Founders Online 2018).

On the topic of ideas, he began by conceding that they are, indeed ‘...the fugitive fermentation of an individual brain...’. He then made his position clear by averring that if ‘...nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea...’. However, once the idea is revealed publicly, Jefferson argued that the idea then ‘...forces itself into the possession of every one, and the receiver cannot dispossess himself of it’. It is in this letter that his often-quoted phrase lives. He explained that ‘(h)e who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me’. In the course of his life, he never sought a patent for his inventions, for it was his conviction, stated in this letter that ‘...ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition ... like fire, expansible over all space, without lessening their density in any point...’.

The letter was occasioned by a fascinating issue: The prolific American inventor, Oliver Evans, had been granted an extension to his patent on the use of three technologies that were exceedingly useful for their labor-saving benefits at mills. However, before the extension could be granted, the technologies had been adopted into practice by several parties, much to the chagrin of the irate inventor, who now sought to be compensated. As someone instrumental to the patent office since its inception in 1790, Jefferson had been requested to provide his perspective. As remarkable as his assessment of the case was—in sum, he concluded that two of the three ideas were hardly even worthy of a patent in the first place—it is this quote from it that captures a great deal of the inspiration for why we undertook writing this book.

It is clear, even to someone who may know nothing of the man, that Jefferson had thought long and hard about ideas, and felt keenly that they held a special significance to humanity. The characteristics of ideas he enumerates inspire thought and are some of the key elements of our theory as well. Our theory, for instance, is in accord with Jefferson's observations that ideas ought to be seen, first, as 'fugitive fermentations of an individual brain'; that, by nature, ideas resist being the subject of 'exclusive property'; that the revelation of an idea 'forces itself' into general possession; and that ideas are 'expansible over all space'. These are precisely the sort of characteristics that one would have in taking an idea-theoretic view of the world. Jefferson's theory of ideas rather clearly seems to be that, while ideas may be developed by individuals, they resist being bound by the confines of an individual's mind. They possess the impulse to propagate into the awareness of a broader society and permeate in all directions.

The present represents the perfect time for all of us to be thinking just as deeply about the characteristics of ideas; we feel that the ability to think about ideas, a form of metacognition perhaps, makes us all better and more conscious thinkers. Having an idea-theoretic view of the world forces us to think beyond our usual concerns and specializations. It readies our mind to conceptualize the impact of ideas that have much wider implications than we might imagine. This is a considerable challenge. Jefferson, polymath though he was, could not have imagined how his perspective on ideas might one day apply to algorithmic and

robotic artificial intelligence, though he would likely have strident and cautionary advice for us, even as he considered their value to the progress of humanity. The fact is that artificial intelligence, in its numerous guises, thrives on information at a pace that is simply beyond the grasp of humans, and so the point worth pondering is whether the force of logic that drives the value of ideas for human progress will now multiply the pace of progress for artificial intelligence to levels that are unfathomable, and perhaps even unintelligible and uncontrollable.

The disruptive abilities—in both the good and bad sense—of automated bots in finance, media, social networks, surveillance, marketing, and politics alone are a mere glimpse of what is possible in the near future in terms of how quickly artificial intelligence has already begun the journey of expanding its influence over ideas ‘over all space’ of human concerns. Some such disruptions are, indeed, attributable to insidious human intention, though others are also based on human ideas forming on the basis of erroneous inferences made by the AI technology. And yet, an unpleasant eventuality is not inevitable if we can first understand the interconnected and complex manner in which humans interact with their environments through all sorts of ideas and then design algorithms that are cognizant of the wider implications of AI, far from their intended purpose. We hope that our theory, by producing a broad enough framework for understanding the mechanisms for ideas, will be useful for the conversation in this regard.

A Bond Across Time

Ideas are a public good in a sense that is far deeper than is meant by the average economist: the mere fact that they can be shared without diminution. They are ‘public’ because they endure beyond us—indeed, beyond even any limited definition of a group of people that we can envisage when we consider what our own community entails. And, as such, ideas constitute a bond across the unfathomable stretches of time and between unseen minds. Our example in Part III of this book on ‘Why We Play’ endeavors to explore precisely this feature of ideas for

the context of exploring the ideas that gave rise to the kinds of sports we play or follow—ideas that we take for granted.

While one may reasonably take the view that one of several characteristics are ‘uniquely human’, we do not believe that thinking about ideas—metacognition, as it is called—can be counted among them. Ideas are the elementary building blocks of thought, and so, to the extent that we grant that a variety of animals are capable of some form of improving upon their processes for thinking, we extend the purview of ideas beyond humans. Similarly, with modern machine learning algorithms, such as those being developed by deep learning theorists, ideas are now unambiguously not merely creatural inputs in the making of intelligent machines, but, increasingly, novel ideas are also the outputs that we see and expect from such applications.

This is a humbling thought. In a broad sense at least, ideas themselves can’t be seen as unique to us, let alone be seen as bound by the ersatz organizational labels that we may place upon them in any given social, political, economic, or cultural context. This is hardly a new observation. Richard Dawkins made a similar observation more than four decades ago in his groundbreaking book, *The Selfish Gene*. Ideas, he suggested, endure beyond the limits imposed upon them by the individual. He remarked that ‘(w)hen you plant a fertile meme in my mind you literally parasitize my brain, turning it into a vehicle for the meme’s propagation in just the way that a virus may parasitize the genetic mechanism of a host cell (Dawkins 1976)’. We will largely sidestep the word meme in this book; it has gathered several meanings ever since its introduction, not just on account of the field of memetics, but also through popular culture. Instead, our focus will simply be on ideas.

The endurance of ideas is a key theme in this book and of the theory that we outline in its pages. However, it is not just that ideas have remarkable endurance that makes them so interesting. It is also that they have a rather unique hierarchy which frames the manner in which they both endure and alter. This alteration is often seen as progress and often lamented as retardation because we impart the *course* of an idea’s alteration significance, and we actively participate in engendering alterations to ideas and affecting this course in specific ways. This process of an idea’s development is a second key theme in this book.

Ideas can be found in scientific knowledge, to be sure, but they can also be found in behaviors that are beyond the scientific domain, not just because they are often ‘unscientific’ but also because they may not be explicable. A Newtonian Law of Motion has as much elegance for its explanatory power as a Shakespearean sonnet has for its universally evocative allure, and yet both stand as ideas. Indeed, as we wish to suggest in what follows, they both stand as representations of *several* ideas, some of which are not just similar, but necessarily *identical*. We, therefore, propose a theory that does not favor any particular genre of ideas, but attempts to look at the broader mechanisms for all ideas generally.

This book’s claim is that there is fundamental value in having a theory of ideas as a workhorse to guide our intuition on any idea, wherever it is found. Just as there is value in the formal theories that guide our understanding of scientific knowledge and in theories that inform our understanding of social norms that affect our behaviors and of those around us, there is value in having a theory that can guide our explorations of ideas, regardless of where they appear.

Without the rigor imparted by disciplinary scholars on the creation of principles that aid our understanding of phenomena, there would have been precious little basis for a book of this nature, not least because we will freely use concepts spanning a wide range of disciplines in developing our own theory of ideas. However, it is perhaps equally necessary to have some broader framework that permits us all the ability to step back and see the forest without forgetting that it is the careful understanding of trees that has enabled us to appreciate the forest all the more. A theory of ideas such as the one we present, therefore, is meant for the generalist who doffs her hat at the dogged specialist, but prefers to examine the whole message.

A Note on Reading This Book

First, this is not meant as an academic book for a professional audience. The overriding purpose we had in laying out a theory of ideas was to provide a simple and intuitive method for thinking about ideas for as varied an audience as we could imagine.

We have, therefore, attempted to present the argument as simply and clearly as we could manage, but also without any attempt to dilute the crux. That said, since we are trying to provide a robust framework with our theory, it was not entirely possible to smooth all the arguments by extracting all the terseness that accompanies proposing a model.

Chapter 1 presents the case for looking at ideas as the most basic unit of analysis, and we suggest that all readers begin there. It also presents a few applications of the theory in broad strokes. While we more expansively develop an application for our theory in Chapters 5 and 6, these briefer applications introduce some of the concepts of the theory and can be referred to again as the reader makes progress through Chapters 2–4 where the theory is detailed more fully.

Chapters 5 and 6 consider an application of the theory to finding the idea antecedents for sports. We concentrate on a class of sports, broadly defined as bat and ball games played in teams. The allure of looking at an idea from the lens of the theory we present is that it permits (indeed, it encourages it!) looking at how an idea's context affects its evolution. It draws attention to the process of how ideas might be motivated by some unrelated and broader spectrum of ideas, and how they might, in turn, become critical to other such seemingly unrelated ideas. Sports are, of course, a fantastic microcosm for a range of ideas and, so, our purpose in selecting this application is to explore some of this variety and its interconnections.

Finally, a word about the title. We realize that calling our efforts a *New Theory of Ideas* may sit somewhat uncomfortably with some, who may even perceive our phrasing as smacking of grandiose pretensions. To a 'real scientist' calling something a theory suggests that it is technically sound and scientific, and perhaps even that it is fairly definitive. To a philosopher, theories of ideas—Descartesean, Lockean, Humean, and so forth—are the subject of intense and unresolved debate.

At the risk of causing some discomfort to such individuals, we thought that the title actually befits our intentions rather well. While we do not claim to have made a sensational new scientific discovery here, we absolutely do wish to signal to the general reader that what follows has helped our own understanding of ideas and the process of innovation immensely. And we hope our readers find similar benefits from our

work, as well. It is true that a theory should be seen as a set of tools that enable an individual to understand some phenomenon and to be able to use it to make some predictions. One of our favorite economists, Ronald Coase, once said that ‘a theory is not like an airline or bus timetable. We are not interested simply in the accuracy of its predictions. A theory also serves as a base for thinking. It helps us to understand what is going on by enabling us to organize our thoughts (Coase 1982)’. Our theory of ideas is meant for precisely that ambition—a base for thinking about ideas.

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Prateek Goorha

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