Informing Innovation: An Informing Systems View of Entrepreneurship

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1. ABSTRACT

This paper uses Informing Science as a lens to carry out an analysis of entrepreneurship (a discipline and practice often viewed as being part of business but critically important to realizing societal and economic impacts in fields like the sciences, engineering and design). Recently advanced frameworks for practice-as-entrepreneurial-learning and for the scholarship of teaching and learning for entrepreneurship (SoTLE) are built upon using T. Grandon Gill's work on academic informing systems to develop a framework that encourages viewing the entrepreneurship discipline as a system that informs entrepreneurial practice.

By means of our analysis we propose that: 1) entrepreneurship can indeed be viewed as an informing discipline; and 2) this provides a useful conceptual scheme that brings to light ways of improving how entrepreneurship informs its clients and might minimize the impact of a possible crisis of informing. Through the analysis and discussion we also take a first look at how an informing perspective of disciplines like the applied sciences, engineering, design and entrepreneurship might contribute to the broader goal of innovating in our economies and societies.

This work is not meant to be critical of our colleagues or the discipline of entrepreneurship. Nor is it meant to be controversial. Rather, we intend to contribute to a conversation already taking place in response to concerns about the impact and effectiveness of our academic activities.

Keywords: Informing Science; Entrepreneurship; Innovation; Applied Science; Engineering, Design.

2. INTRODUCTION

In his recent book [1], *Informing Business: Research and Education on a Rugged Landscape*, T. Grandon Gill uses Informing Science to carry out a critical analysis of the activities taking place in today's business schools. He joins the ranks of business stakeholders who have promoted a negative view of business school performance and, in doing so, questions the rigor, relevance and impact of the outputs of business schools. He concludes that the business discipline has "a crisis of informing", makes recommendations for redesign of the field and suggests that his approach lends itself to other academic areas. Gill's analysis provided the inspiration for the organization of the International Symposium on Academic Informing Science and Engineering [2] to which this paper is submitted, and informed the overall purpose of that symposium which is "to bring together academics concerned about the impact and effectiveness of their activities to share their academic experience with regards to this issue [2]."

While grounded in emerging theories in entrepreneurship (such as, most notably, the theoretical model of entrepreneurial learning advanced in [3]), this paper does not aim to advance a theory. Rather, it develops a conceptual scheme of the nature suggested in [4] and [5], and described recently in [6]. In other words, while what we share here may form the basis for extending existing theoretical understandings in future work, our present aim is only to put forward a model of the discipline of entrepreneurship that is relevant to, acceptable for and potentially actionable by stakeholders in the entrepreneurship discipline. We propose that conceiving of the discipline as an informing system provides a useful perspective and powerful lens through which those stakeholders can view their work – a perspective that is especially important if entrepreneurship faces the crisis of informing that has been proposed to be a challenge for the broader field of business.

Section 3 of this paper sets the stage for the work that follows by summarizing the state of play in higher education and entrepreneurship education, and by discussing the role of entrepreneurship research in the discipline. Section 4 articulates the central questions of the research being described here, and Section 5 speaks to the methodological approach being taken to answer those questions. Section 6 presents three foundational concepts: 1) academic informing systems, complexity and a crisis of informing; 2) entrepreneurial learning as practice; and 3) the scholarship of teaching and learning for entrepreneurship (SoTLE). In turn, these are analyzed and used as the basis for arriving at the results in Section 7. Section 8 discusses the contributions of the paper, implications for those working to innovate in the fields of science, engineering, design and entrepreneurship, and avenues for future work. Section 9 makes some closing remarks.

3. BACKGROUND

In the background sections that follow, we do not intend to provide a complete review of the relevant literature in higher education or entrepreneurship. Rather, we use recent literature to describe the essential contextual elements and broad motivations for the work being described here.

Higher Education

Calls are being made around the world for new approaches to higher education [7], [8], on the premise that we are part of an information society characterized by: technology-savvy students who learn more by absorption and experience than by reading a training manual or attending a course [9]; a shift in the focus of creativity from generating original content to the timely rip-mix-burn reshaping of existing content [10]; increasing requirements for interdisciplinary work carried out by teams across functional and institutional boundaries [8]; new ways of perceiving and organizing knowledge in society [11] and in the educational sector [12]; and new forms of teacher and learner interaction enabled by innovative technologies and approaches to copyright [13]. Additionally, it is frequently argued that Web 2.0 technologies are causing a disruption in higher education much like those that took place or are taking place in the music, newspaper, book and television industries

[14], [15]. In order to survive in the networked, global economy of the future, universities are being told to embrace collaborative learning and collaborative knowledge production [15], and teachers are being encouraged to shift their practices from the traditional teacher-centered transfer of subject-area-focused knowledge to the development of resources and practices that teach students the skills required to learn, collaborate and build knowledge on their own [7], [8]. Clearly, present day cultural, societal and technological changes pose challenges for academia as it strives to best enable today's students and practitioners.

Enabling Entrepreneurship

Despite having matured significantly in its relatively short history, the academic field of entrepreneurship is still debating its maturity and seeking its own legitimacy [16], and trying to chart its path forward, e.g. [17], [18], [19]. Meanwhile, many researchers, e.g. [19], [20], [21], are seeking to better understand and advance the roles of entrepreneurship education. We suggest that there is no area of practice to which the changes described in the section above are more relevant at this point in time than entrepreneurship. And, as the calls for change are being made, debate about and research into how to best enable entrepreneurs continue to be wide-reaching and extensive [20], [21], and there are questions about whether the business school is the best place to teach entrepreneurship [22], [23] and about the appropriateness of traditional approaches to learning how to conceive of and start successful new ventures (such as the ubiquitous business plan, e.g. [24]).

The Roles of and Relationships between Education and Research in Entrepreneurship

A lot has been said about how entrepreneurship drives economic growth and creates value in society, e.g. [25], [26], [27], about the role of entrepreneurship education in encouraging and fostering entrepreneurship and innovation, e.g. [18], [19], and about the role of entrepreneurship research in doing the same. As an example of the latter, the diagram in Figure 1 illustrates a generally accepted causal relationship between entrepreneurship education, entrepreneurial activity and the benefits to individuals, firms, economy and society. It also shows the key role that entrepreneurship research is meant to play in the relationship between entrepreneurship education and entrepreneurial activity.
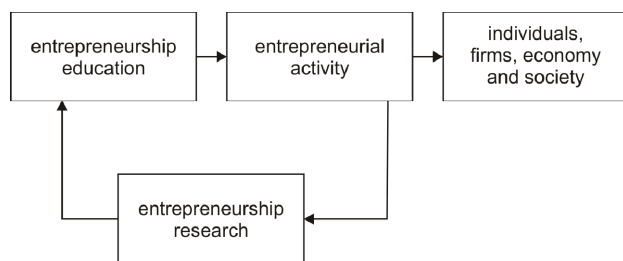

Figure 1: Commonly Understood Relationship between Education, Activity and Research in Entrepreneurship (from [20])

4. RESEARCH QUESTIONS

Figure 1 implies that entrepreneurship plays an informing role in our economy and society and, because it is typically viewed as a sub-discipline of business, Gill's analysis might suggest that the discipline is failing to fulfill that role. Meanwhile, the informing perspective has never been explored in entrepreneurship. As such, the work described in this paper uses Informing Science as a lens to carry out an analysis of the discipline in order to answer the following question:

1. Can the discipline of entrepreneurship be viewed as an informing system?

And in the case that it could, we also sought to answer the following questions:

2a. Can that perspective bring to light significant ways in which the impacts of a possible crisis of informing can be avoided? In other words, can it help academic faculty members respond to a possible threat of the nature Gill warns us about?

2b. Can that perspective provide insight into how the discipline of entrepreneurship can best foster innovation in a broad sense? In other words, can that perspective help academic faculty members uncover and realize opportunities to be better at what they aim to do?

5. METHODOLOGY

We substantiate the positions put forward in this paper with evidence from an objective discussion of the topic informed by current and relevant research. As was mentioned in the introduction, our approach is to use the tools and principles of Informing Science to extend and complement emerging work in entrepreneurial learning and the scholarship of teaching and learning for entrepreneurship (SoTLE). As implied by the research questions above, we aim – in the broadest sense – to put forward a perspective and frameworks that contributes to the conceptualization of scholarship in the entrepreneurial academy and provides a lens through which scholars, curriculum designers, teachers and learners can view their work. Three of the key building blocks for our work are summarized next along with some of the related analysis.

6. FOUNDATIONAL CONCEPTS AND ANALYSIS

Concept 1: Academic Informing Systems, Complexity, and the Proposed Crisis in Business

First introduced in Eli Cohen's seminal paper [28], Informing Science has evolved into an important transdiscipline that is impacting many fields by breaking down boundaries and encouraging the flow of knowledge between disciplines [29]. It was already mentioned in the introduction to this paper that Informing Science was used by Gill to analyze the activities taking place in today's business schools and conclude that the business discipline has "a crisis of informing." More specifically, the business school is cast in Chapters 1 and 2 of [1] as being an academic informing system in which faculty members are responsible for informing their clients, a group of people that includes business students, business practitioners, researchers (in business and other fields), and business educators. Evidence is provided in support of a conclusion that the business academic informing system is failing at its task of informing business in a serious and widespread way. It is proposed in [1] that this is the result of two problems: 1) the research being conducted in business schools is producing invalid – and therefore irrelevant – findings from the

perspective of the practitioner and soon-to-graduate student; and 2) business faculty members fail to communicate in an effective manner findings they are producing. Further, and quite importantly, it is argued in Chapters 3 and 4 of [1] that both of these problems are the result of the complexity of the underlying business environment. Drawing on Gill's own analysis [30] and the seminal work of Kaufmann [31] (and others) on complexity and rugged fitness landscapes, and by highlighting the research-practice gap in business, these chapters argue that the business landscape is inherently complex. It is then explained how complexity implies a rugged fitness landscape and how, on such landscapes, general theories developed through pure research tend not to apply well in practice. This is to say that while a theory may have intuitive appeal and serve well to guide thinking in such environments, it cannot be relied upon to predict or explain behavior in each case.

With all of this in mind, one might summarize Gill's logical argument as follows: 1) business faculty members spend much of their time on research that tends to produce general theories; 2) general theories are what business faculty often teach their students and use as the basis for any consulting they do; 3) business takes place in a complex environment; and 4) general theories do not conform to every reality in complex environments. So, it follows in this argument that business faculty members spend much of their time on things that do not inform specific realities in business and, as a result, practitioners tend to show little interest in those things. It would also imply that students tend to be misinformed and ill-prepared for careers in business. All of this would mean that the business academy is not doing a good job of informing its clients. While this argument is not without criticism (as Gill admits himself in the preface to his book), we will take it as a starting point for the analyses presented here. And because his analysis does not extend explicitly to entrepreneurship, we begin this task next.

On the Extension of Gill's Analysis to Entrepreneurship: That the entrepreneurship environment is complex – as the word complex is colloquially defined – would seem immediately obvious to anyone who has been an entrepreneur. However, whether it is complex in the way Gill defines the word is important to consider before we proceed. To this end, a review of the literature quickly turns up studies that demonstrate or explore the inherently complex, heterogeneous and atheoretical nature of the entrepreneurial process, e.g. [32], [33], [34].

This does not mean that the case has not been made for the development of theory in the field of entrepreneurship or that much theory has not already been advanced. For a recent summary of the development of research in the field, see [35]. As described there and in [16] and [19], while entrepreneurship – as a disciplinary research field – is less than 30 years old today, it shows the signs of a maturing field: from an increasingly internal orientation and the establishment of key areas of research to a discipline-specific theoretical approach with a professional language of its own. It is described in [35] and [36] that research in the field has shifted away from being more technical and applied in favor of being more theoretical, and as has been the case for years, the search is on for a distinctive "theory of entrepreneurship" [36].

As it relates to the teaching function, recent arguments have been made for higher levels of theoretical content in what faculty members deliver to their students, e.g. [37].

We are advised in [35] that the kind of maturity taking place in the discipline leads to research for which the immediate applicability is of less importance. Indeed, with these signs of maturity have come signs that might point to an increasing research-practice gap in the field of entrepreneurship. For example, "academia vs. business incongruence" is discussed as a major challenge to the field in [38], a "practice perspective of entrepreneurship" is argued for in [39], a workshop on the gap itself was held at the 2010 annual conference of the United States Association of Small Business and Entrepreneurship [40], and there are many peer reviewed examples of published entrepreneurship research not corresponding to the concerns of business owners, e.g. [41].

So, it would appear that the field of entrepreneurship is complex, that the nature of the research it produces is becoming more theoretical as it matures, that arguments are being considered for moving to a more theoretical approach to teaching, and that the research-practice gap of which Gill speaks extends to entrepreneurship. In this short treatment, we have certainly not been able to demonstrate conclusively that that a "crisis of informing" exists in entrepreneurship. Rather, we hope to have convinced the reader of this sub-section that the same specific conditions do exist in entrepreneurship as in business and that, at least, the discipline does not appear to be an exception to the analysis Gill has shared.

Concept 2: Entrepreneurial Learning as Practice

The concept of entrepreneurial learning has been receiving increasing attention in recent years because it provides a useful lens for studying entrepreneurial activity and the nature of entrepreneurial practice, e.g. [42], [43], [3]. This perspective is in contrast to other dominant theoretical perspectives of entrepreneurship, including the so-called functional, personality, and behavioural perspectives reviewed in [42]. Existing definitions of the concept of entrepreneurial learning tell us that it involves acquiring, assimilating and organizing newly formed knowledge, e.g. [44], [45], [42], [3], in relation to existing stocks of knowledge, skills and experience, e.g. [46], [47], in a process that is cumulative [45] and recursive [20], and which involves both experiential and vicarious modes of learning [3]. We will use this perspective as a key building block in our analysis. For example, see the Holcomb et al. architecture shown in Figure 2 that is taken from [3]. This theoretical framework presents experiential learning (through direct experience) and vicarious learning (through modeling others' behaviors and actions) as two different learning contexts, and highlights the effects of heuristics within those contexts and across the learning process. It implies a process by which people acquire, assimilate and organize new knowledge for the discovery and exploitation of opportunities. For example, it provides a model of the typical process an engineer-turned-entrepreneur would follow if he or she decided to bring an invention to the marketplace.

On how this supports the view of entrepreneurship as an academic informing system: The conceptual framework in Figure 2 and the full description in [3] represent a process by which entrepreneurial practice takes place. To use the language of Informing Science, e.g. [28], these provide a fairly complete and rigorous description of the *task completion environment*.
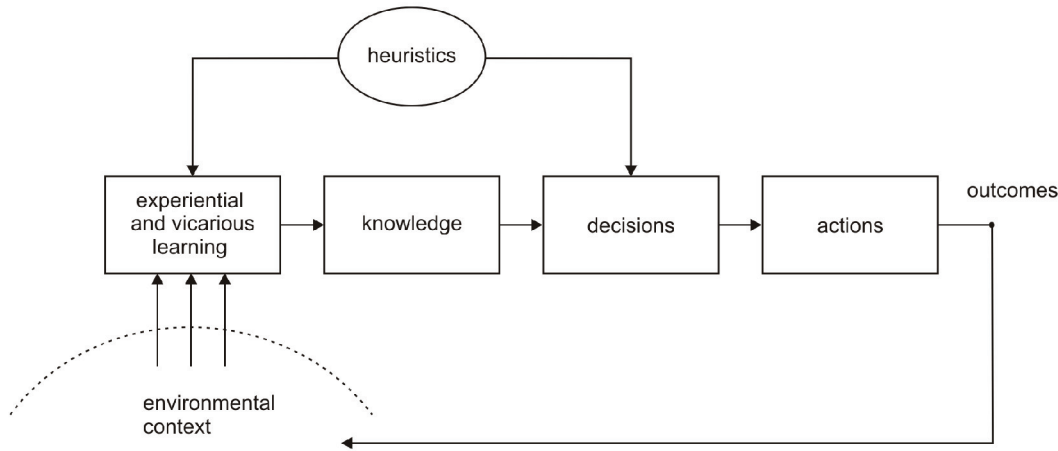
Figure 2: Conceptual Framework for Entrepreneurial Learning (after [3])

Concept 3: The Scholarship of Teaching and Learning for Entrepreneurship (SoTLE)

As it is in this paper, our intent in [48] was to advance a new way in which the entrepreneurship scholar can view his or her work. There, the seminal work of Ernest Boyer [49] and the concept of the Scholarship of Teaching and Learning (SoTL) were reviewed and the architecture in Figure 2 was extended in several ways that are important to the work being reported here. First, the "outcomes" (on the far right of Figure 2) were adapted to reflect both the proximal and distal nature of outcomes of a learning system of this type. Second, the SoTL work that some researchers carry out was situated as part of the environmental context (on the bottom left of Figure 2) and it was made explicit that in this model, this type of scholarship contributes to scholarly teaching and, in turn, informs practice. Both of these changes are reflected in the framework we present later in this paper (compare the relevant parts of Figure 2 and Figure 4, for example). The main outcome of [48] was what we called a framework for the scholarship of teaching and learning for entrepreneurship (SoTLE). With that framework as a basis, we said to entrepreneurship educators that "… rather than just being teachers informed by the entrepreneurship-related scholarship we do (even if that scholarship is focused in the area traditionally referred to as entrepreneurship education), we need to move deliberately to become a more integral part of our regional entrepreneurial ecosystems." We argued that through such a perspective, entrepreneurship faculty could aspire to their own version of a teaching hospital and, as such, encouraged "entrepreneurship faculty to serve entrepreneurial learners first and foremost by enabling their learning experience, just as medical faculty serve their patients first by enabling their healing. And then by contributing wherever possible to a collective scholarship of teaching and learning for entrepreneurship, based on what takes place in our classrooms and at their interface with our communities and regional ecosystems."

On how this supports the view of entrepreneurship as an academic informing system: In this paper we are building on the work done in [48] to develop a more complete conceptual scheme. We do this by further extending the framework in Figure 2 and incorporating work done in the field of Informing Science. In Figure 3 for example, Boyer's four well-known concepts of scholarship are used to slightly modify the categories of research Gill describes in Chapter 2 of [1].

SoD stands for scholarship of discovery, SoI stands for scholarship of integration, SoA stands for scholarship of application, and SoTL was defined earlier. This provides a useful link between the work of Boyer and the field of Informing Science. To use the language of the latter, e.g. [28], this serves to classify the key types of research that make up the *delivery system*. What the informing environment and the rest of the delivery system actually look like is the subject of the next section.
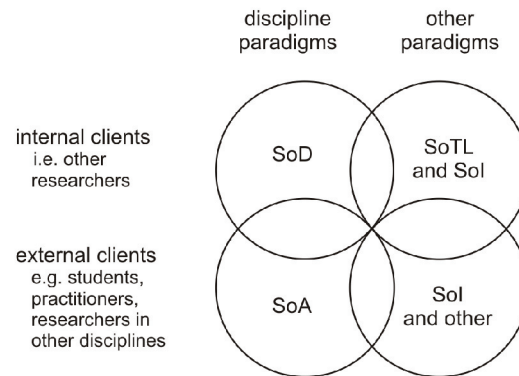

Figure 3: Categories of Research and Scholarly Activity within an Academic Informing System

7. RESULT: AN INFORMING SYSTEMS VIEW OF ENTREPRENEURSHIP

The main contribution of this paper is the conceptual scheme that is shown in Figure 4 for conceiving of entrepreneurship as an informing discipline. As shown, it uses the concept of an academic informing system to expand the conceptual framework for entrepreneurial learning in Figure 2. It brings into a single conceptual scheme the *informing environment*, the *delivery systems*, and the *task completion environment* for the entrepreneurship discipline. It shows how the research and scholarly activity of faculty members (recall Figure 3) informs the practicing entrepreneur in three ways: 1) through what we call "informed teaching"; 2) through what we call "informed consulting"; and 3) directly, e.g. through the entrepreneur's reading of disseminated research and various summaries thereof. It also shows that there are other sources of informing – of course the entrepreneur is far from dependent on the entrepreneurship faculty member to be successful.
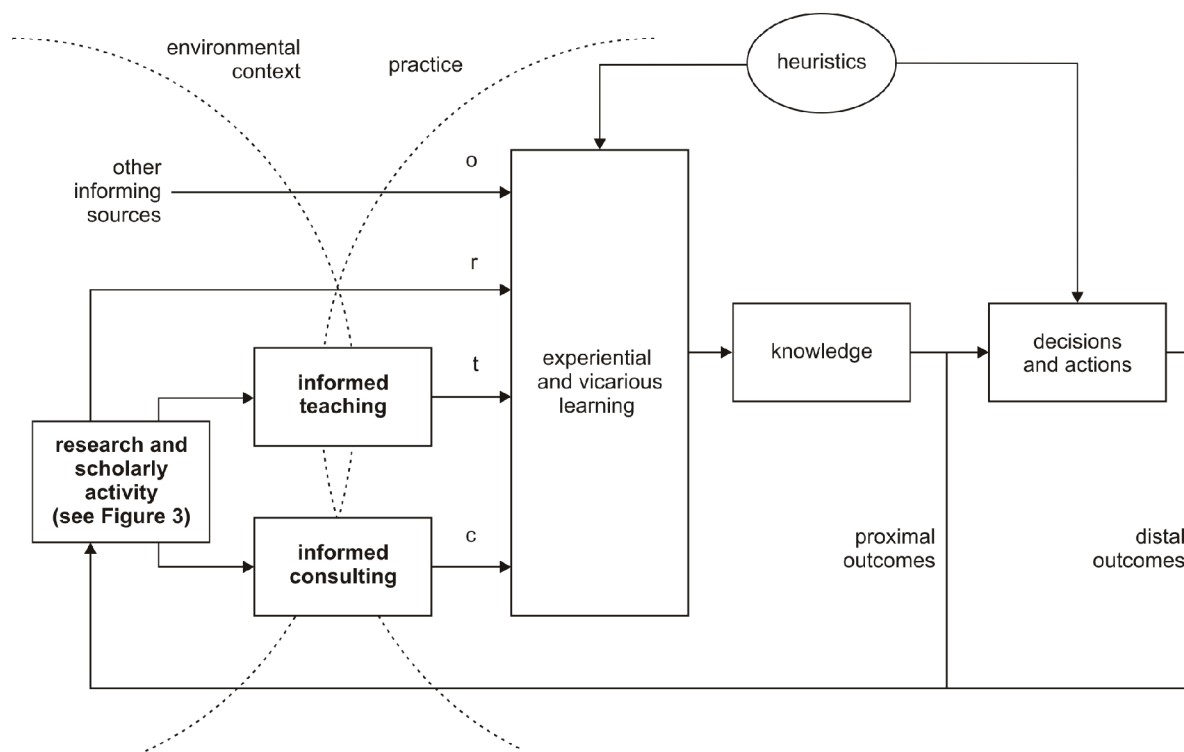
Figure 4: An Informing Systems View of Entrepreneurship

8. DISCUSSION AND FUTURE WORK

General Discussion

The conceptual scheme presented in the previous section is important for several reasons. First, as one can see from visual inspection of Figure 1 and Figure 4, it provides a significantly more sophisticated (and likely more representative) understanding of what takes place in the entrepreneurship discipline than that implied by Figure 1. Second, an informing systems view of the discipline like the one presented here opens the door to a wealth of analysis, only some of which can be treated in the space we have available. In the following we highlight the most important observations arising from those analyses.

On the Types of Scholarship in which Entrepreneurship Faculty Members Engage: If you buy into what Figure 3 and Figure 4 are saying then it is hard to overlook the fact that all four types of scholarship are important to a healthy informing system (which we define as a system in which all of the internal and external clients are sufficiently well informed to meet their goals). Specifically, this means that the SoA and the SoI are at least as important as the others because they are aimed at external clients – recall Figure 3. (Note that this does not mean that they aim to solve the problems of external clients, although they may, but rather that they aim to inform and be communicated to external clients.) An informing systems view of the discipline underscores the importance of carrying out all four types of scholarship through the activities of teaching, research and consulting. And yet, we observe from our studies of top journals and conference proceedings that most of the scholarship being carried out and rewarded in the entrepreneurship academy falls into the categories of the SoD and the SoTL (the latter referred to

almost exclusively as research in entrepreneurship education). We have all heard arguments against only disseminating through articles in journals and conferences, but this perspective on the discipline helps us see and articulate more clearly the idea that boosting and rewarding the levels of client-aimed scholarship taking place (the SoA and the SoI) could help the discipline in the face of a crisis of informing; the more our research is intended to inform the client, the more relevant he or she is likely to find it.

On the Informing Roles Entrepreneurship Faculty Members Can Play: Our informing systems view of the discipline in Figure 4 highlights the three most important ways in which entrepreneurship faculty members can inform the discipline: 1) the four types of scholarship specified in Figure 3; 2) informed teaching and; 3) informed consulting. This is more representative than the framework in [48], which presented things in a similar way but only included the perspective of informed teaching. This broader perspective invites consideration about which of the three roles individuals choose to play, and whether the three are represented as they should be in an aggregate sense within the discipline. It is important to clarify that consulting and teaching can be informed by any of the four types of scholarship (as well as by other factors in the general informing environment). This means that just because the SoA and the SoI are aimed at external clients, they are not the only types of scholarship that inform consulting and teaching; even though the SoD and the SoTL are aimed at internal clients, they can be used by the faculty member to inform consulting and teaching practices. As such, to minimize the likelihood and impact of a possible crisis of informing, we promote designing an appropriate balance of informing roles and types of scholarship for one's specific informing context and goals. In turn, this will be a function of and require specific knowledge about the local and regional innovation ecosystems.

On Closing the Research-Practice Gap: While careful selection and balancing of the types of scholarship and informing roles faculty undertake will go a long way to narrowing the research-practice gap, we propose that the conceptual scheme presented here suggests an additional mechanism for doing this. Figure 4 is very explicit in how scholarly activity seeks and integrates feedback available in the form of proximal and distal outcomes. As described in [48], proximal outcomes are immediate short-term measures of entrepreneurial success, and might include changes in mindset, new skills and knowledge gained, and quarterly profits generated by a new venture. Distal outcomes are long-term follow-up measures of success, and might include personal growth and satisfaction of the individual entrepreneur, long-term growth and survival of the venture, and economic contributions to job creation. By striving to measure and incorporate this kind of feedback in response to each specific informing activity that is undertaken, we propose that the research-practice gap can be narrowed. This will be especially fruitful if it can be done in cases where the faculty member consults to or teaches practicing clients, or when the faculty member participates in the system as an entrepreneur.

We contrast this to the typical feedback mechanisms ubiquitous in entrepreneurship today, as implied by Figure 1. Data are collected from "real" companies in "real" situations, analysis is carried out to characterize behaviors or to test or arrive at theories that can be generalized, and the results are disseminated through peer reviewed publications. In these cases, although practitioners may attend some of the conferences and read some of the publications, there appears to be relatively little informing of external clients going on and relatively little feedback being received by the informer on the success of the informing.

Broad Context

Before making our closing remarks, we wish to speak to the broadest context of this work by explaining and addressing the first part of the title of this paper which reads "Informing Innovation". We have referred in this paper to how a healthy academic informing system helps its internal and external clients by making sure they are sufficiently well informed to meet their goals, but we have been somewhat vague about what the overall goal is for the entrepreneurship discipline. As the title of the paper implies, entrepreneurship aims to boost innovation. We have included Figure 5 to avoid having to pick sides in the debate about the definition of entrepreneurship and in order to quickly relate this work to the science and engineering contexts. The innovation value chain shown in Figure 5a is borrowed loosely from [50] and we have added parts b, c and d in order to illustrate which disciplines participate in which parts of the overall innovation process, to show the ruggedness of the corresponding fitness landscapes, and to highlight the role that researchers play in practice. This is analogous to the continuum of disciplines presented in Chapter 3 of [1], but focuses more directly on the task of innovating and adds the dimension in part d. By looking at things this way, one can confirm that the entrepreneurship informing system is one of many such systems trying to innovate for the betterment of our economies and societies. As shown, other disciplines contributing to this to various extents include the applied sciences, engineering, design and various business disciplines. One can also see that entrepreneurship suffers from the dual handicap of being characterized by a relatively rugged fitness landscape, and having a situation where it is rare for the researcher to be a practitioner. In this situation, the research-practice gap tends to be higher and it becomes more difficult for research to deliver results that are both good explainers and predictors of reality (theories) *and* useful for informing practice (conceptual schemes) [6].

So, in addition to what we have discussed about types of scholarship and the informing roles faculty members can focus on in the face of a crisis of informing, we lend our support to the notion that it is important to make room for research that does both of these; as framed in [6], the entrepreneurship discipline should seek to develop theories *and* conceptual schemes, and to maximize the overlap between them.
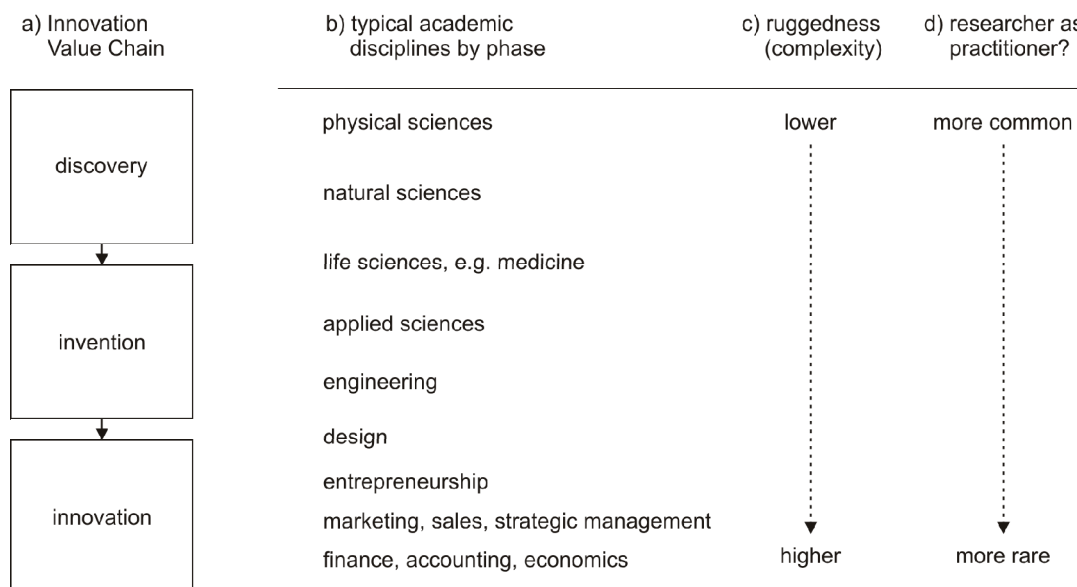

a) Innovation Value Chain	b) typical academic disciplines by phase	c) ruggedness (complexity)	d) researcher as practitioner?
discovery	physical sciences	lower	more common
	natural sciences		
	life sciences, e.g. medicine		
invention	applied sciences		
	engineering		
	design		
innovation	entrepreneurship		
	marketing, sales, strategic management	higher	more rare
	finance, accounting, economics		

Figure 5: Ruggedness and Roles of Selected Disciplines across the Innovation Value Chain

Future Work and Open Research Questions

We made the case in this paper that there is no reason that entrepreneurship does not fit within the analysis presented by Gill in [1]. However, we did not demonstrate conclusively whether a "crisis of informing" actually exists in entrepreneurship. This would be a useful next step, especially if it does. Is there a crisis of informing in entrepreneurship?

We presented our informing systems view of entrepreneurship as a *conceptual scheme* as that term is defined in [6]. It may be of interest to some to know whether this scheme can extend existing theories of entrepreneurship. Is there a need for an informing systems theory of the entrepreneurship discipline?

Having just introduced the innovation value chain, we suggest that entrepreneurship faculty members might have a lot to gain from an academic informing perspective that is shared with colleagues working near them in that chain, i.e. people in applied sciences, engineering, design and some of the business disciplines. What, if anything, can Informing Science and the informing systems approach to perceiving of a discipline tell us about the broader challenge of innovating for a better society and economy?

9. CLOSING REMARKS

In response to our practicing colleagues who argue that they "don't get" entrepreneurship research and in response our academic teaching colleagues who say that doing research in that field is not for them, we would show them Figure 3 and Figure 4 of this paper. To the entrepreneurs we would clarify that they are suffering in large part because they are not being informed by enough externally-aimed scholarship and suggest that they may not be providing enough feedback to faculty members, and to the teachers we would suggest that as a group we are not doing enough externally-aimed scholarship, including that which produces conceptual schemes, nor are we informing our clients well enough through informed teaching and consulting activities.

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