

Does the Dismal Science Need to be Redeemed?

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In some of the richest and best endowed universities, the tutors content themselves with teaching a few unconnected shreds and parcels of this corrupted course; and even these they commonly teach very negligently and superficially.

—Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*

The title “university” derives from a shortening of the Latin phrase *universitas magistrorum et scholarium* meaning “community of masters and scholars” (Harper 2017). However, many modern universities appear to have lost the community in the pursuit of mastery and scholarship. The increasing emphasis on ever more specific specializations risks rendering departments into echo chambers, with little incentive and at times ability to communicate with other members of the university community. The question then, is why do economists, who devote their lives to purporting the advantages of trade, fall into this trap? And how can they so easily ignore other fields that clearly have a comparative advantage in various arts and sciences? This paper endeavors to explain both the benefits of specialization and the necessity for trade between disciplines. It will further provide a model to understand the difficulties of interdisciplinary dialogue to address many of these challenges.

Specialization without trade loses all of the benefits of the division of labor. While, as Adam Smith explains, the division of labor within different academic fields increases efficiency, the work of John Henry Newman adds that without trade we lose the benefits of specialization. Trade within the university breaks down because the language of specialization is distinct from the language of the broader community. While jargon increases the efficiency of dialogue within a discipline, a functioning university community requires a language for trade. This trade is ineffective in a monopoly model, when one group directs dialogue for an entire group, as opposed to a cooperative model, when those engaging in dialogue set aside minor differences for the sake of a larger goal. In the final section of this paper, I will apply the model previously set forth to a particular example of interdisciplinary dialogue: the dialogue between economics and theology.

I. DIVISION OF LABOR

The academic community functions as a market for ideas. Within this understanding, Adam Smith’s discussion of the division of labor explains the benefits of specialization with-

in the academy. However, specialization must be accompanied with trade. John Henry Newman's vision of a university further explains why specialization must be accompanied with dialogue in order to fulfill the end goal of academic pursuits, a more comprehensive understanding of the world.

a. Smith's Division of Labor

Adam Smith outlines the efficiencies produced by a division of labor. While in a university setting specialization produces many of the same efficiencies as in a marketplace, without interdisciplinary dialogue, the community of scholars loses many of the benefits of specialization. Smith explains his concept of the division of labor as "the greatest improvement in the productive powers of labor" (Smith 1904, I.1.1.). Simply put, when we divide the production of a good into its simplest individual tasks, and give each of those tasks to a distinct person, our labor becomes much more productive.¹ Smith explains that, "the separation of different trades and employments from one another, seems to have taken place, in consequence of this advantage."⁴ Thus, the farmer is only a farmer and a manufacturer is only a manufacturer because the farmer and manufacturer's labor is much more efficient if they devote their labor to one industry.

Smith gives three reasons for this phenomenon: an increase in dexterity, time saved from switching, and innovation (Ibid.). For example, a blacksmith, charged with the unusual task of making nails could possibly make two or three hundred nails a day, "and those too very bad ones" (I.1.6.7). However, Smith notes having seen boys who "had never exercised any other trade but that of making nails" and are capable of making over two thousand three hundred nails a day. Certainly, the blacksmith is more skilled than those boys in the art of metalworking, but the boys can make more nails. By only making nails the boys increase their dexterity in nail making, and thus their labor is much more productive given their increase in skill in their narrowly defined trade.

The second benefit to the division of labor is the time saved from switching between tasks. In this example, each of the boys had been making the entire nail themselves. But Smith notes that they could further increase their efficiency if they divided the task of making a nail into its individual parts, stirring the fire, heating the iron, etc., because of the time saved from switching tools and moving around in the workshop (Smith 1904, I.1.6.). Finally, the third benefit of the division of labor is the increased likelihood of innovation. Smith writes that "men are much more likely to discover easier and readier methods of attaining any object, when the whole attention of their minds is directed towards that single object, than when it is dissipated among a great variety of things (Smith 1904, I.1.8). If I only complete one task, then I am more likely to create a superior way of doing said task in an effort to save my own labor. Because of this innovation, people will create new machines that are more efficient than the status quo, and thus our labor will become more productive.

The conversation about the division of labor has up to this point relied on manufacturing; however, Smith himself expands its benefits to his own field: philosophy. He explains that the subdivision within philosophy, "as well as in every other business, improves dexterity, and saves time" (Smith 1904, I.1.10). As a result, "each individual becomes more expert in his own peculiar branch, more work is done upon the whole, and the quantity of science is considerably increased by it" (Ibid.). Thus, Smith applies the benefits of the division of labor to the specialization within an academic field, allowing for a greater understanding of the world than without specialization.

Thus, academic disciplines provide the potential for the academy to better serve society by creating a more comprehensive and nuanced understanding of the world. However, the division of labor relies on trade. Through specialization, a group of boys can produce thousands of nails each day, but unless they trade those nails for bread, they will starve. In the same way, without trade academics suffer from an intellectual starvation, where they only ever see the slice of the world their specialization was designed to see. The benefits to the division of labor are clear, and within this framework, the university system serves as a clear set of institutions to facilitate the collection of knowledge and facilitate trade. However, without

meaningful interdisciplinary dialogue, members of the university resemble an artisan who does not sell his wares.

b. Newman's Division of Labor

John Henry Newman, a Catholic cardinal and theologian in 19th century England, provides an expansive discussion of the role of the university in light of specialization. His best-known work *The Idea of a University* was originally given as a series of lectures while Newman was charged with opening a Catholic university in Ireland. In these lectures, Newman offers a conversation about how various academic fields should interact with each other, given a division of labor. Newman's vision offers a framework to imagine the interaction of various disciplines and specialists towards a common goal: the pursuit of knowledge.

For Newman, all fields represent a portion of the truth and we can only fully understand truth when we compile the understanding of all fields. He writes, "all knowledge forms one whole, because its subject matter is one; for the universe in its length and breadth is so intimately knit together, that we cannot separate off portion from portion, and operation from operation, except by a mental abstraction" (Newman 2015, p. 43). In the real world, economics, politics, psychology, sociology, and theology do not occupy different spheres, but instead co-exist and interact.² We can only separate these various causes and effects through what Newman calls "mental abstraction," by creating different perspectives and methodologies to try to make sense of our world, each seeing a particular slice of it. However, economic, political, social, and religious concerns are not separate in the real world, and thus must be seen together to understand the world in its full complexity.

Newman gives the example of a man, who is vastly more complicated than any one discipline can comprehend. Therefore, in order to understand him, we must view him through all disciplines, analyzing his physical nature, psyche, or his relation to his family, community, or God, each being the subject of a particular science (Newman 2015, p. 43). As Newman explains, "When we think of him in all these relations together, or as the subject at once of all the sciences I have named, then we may be said to reach unto and rest in the idea of man as an object or eternal fact (Ibid.). Furthermore, each field operates under its own set of non-transferrable assumptions. Thus, simply expanding a field's boundaries is not sufficient to expand our understanding, because their different assumptions and methodologies may not work in new situations. For example, Newtonian physics assumes that what happens today will happen tomorrow, which may be true for physics, but not necessarily for other fields (Newman 2015, p. 44). Thus, trade is essential to further the pursuit of knowledge, because true understanding exists only in the compilation of the complex, inter-weaving systems of the world.

Because of the need for and perceived lack of trade, Newman explicitly critiques the division of labor. He writes of a particular student, "If his reading is confined simply to one subject, however such division of labour may favour the advancement of a particular pursuit, ... certainly it has a tendency to contract his mind" (Newman 2015, p. 76). While the division of labor increases efficiency, for Newman, the trade-off of narrowing of one's worldview is too high. However, Newman does not advocate for an abandonment of specialization. Instead, he offers a different vision of a university, as "an assemblage of learned men, zealous for their own sciences, and rivals of each other, [who] are brought, by familiar intercourse and for the sake of intellectual peace, to adjust together the claims and relations of their respective subjects of investigation" (Ibid.).³ Thus, while on the surface Newman appears to critique the division of labor, he in fact critiques specialization without trade. Newman sees the university as the facilitator of communication between fields, as the space where they come together. This communication increases the quality of our knowledge, by forcing practitioners of different fields to adjust their claims to be in line with the whole; that is, the community of master and scholars corrects for systematic biases within a particular field. Thus, without trade specialization merely contracts the mind; however, with "familiar intercourse" zealots of their own sciences can come together to not only increase production, but also improve the quality of the knowledge of their peers.

While Newman sets forth a comprehensive philosophy of education, modern commentators of *The Idea of a University* question whether his vision is realistic for the modern university. As one commentator notes, “the word *University* has remained the same from Newman’s day to ours while the reality it describes has not” (Turner 1996, p. 291). The reality of modern universities provides a remarkably different context for researchers and educators than Newman suggests. The hyper specialization, often without interaction between specialists in different disciplines, within the academy leaves little room for Newman’s description of the unity of all knowledge.⁴ The question then becomes how do we create a culture oriented towards the unity of knowledge within the modern university. The first step forward, which we will discuss in the next section, is to create methods of effective dialogue between disciplines to allow for the benefits that Newman describes.

II. DISSOLUTION OF DIALOGUE

Up to this point, we have discussed the benefits of specialization and the need for trade. The problem, however, is that this trade breaks down, because different people interpret the world in different ways. Trade relies on communication, which falters when each conversant interprets the world differently. People participate in language groups that become communities. Individual disciplines utilize jargon, which facilitates efficiency, but also excludes non-experts from participating in the conversation. Without a common language between disciplines, specialization continues, but without trade. This specialization then becomes an echo chamber instead of a center for knowledge creation because it is not oriented to the final consumers of the knowledge created.

In their article “Shared Mental Models: Ideologies and Institutions,” Arthur Denzau and Douglass North explain the mental model framework and explore its implications within dialogue. This model explains why communication breaks down between disciplines and provides a way forward to circumvent the difficulties in communication. A mental model is the framework through which we interpret the world (Denzau and North 1994, p. 4). We constantly experience different phenomena, and mental models provide structure to understand these phenomena. Some aspects of our mental models are physiological; for example, our brains interpret light and sound waves into images and voices that we can understand (Denzau and North 1994, p. 13). However, much of our mental models are learned from our culture. When more than one person interprets and explains their environment in the same way, they have what Denzau and North call a shared mental model. However, because no two people have exactly the same experiences, each individual’s mental model will vary to some degree.

What does this mental model framework mean for communication? When two people with different mental models try to communicate, their different ways of describing the world can prevent effective conversation. Communication consists of encoding and decoding. When I communicate with someone, I have to first translate my thought patterns into a form that can be communicated. However, I cannot include everything I used to make said thought into the communication, in part, as Denzau and North explain, because “we almost never know what factors actually influenced a decision we have made” (Denzau and North 1994, p. 19). Thus, I can never fully communicate every piece of information that might be necessary for the listener to understand my message. The second problem occurs when the interlocutor must then decode my message. In order to understand my message, the listener must first interpret what I say through their own mental model, which is “strongly influenced by the categories and beliefs that the listener already has about the world” (Denzau and North 1994, p. 20). Thus, because they perceive the world differently, the listener may interpret my message differently than I intended.

Figure 1 demonstrates how these communication errors occur. Person L has a thought (Idea A) that she wishes to communicate with Person C. In order to do so, she must first encode her thought into words, phrases, and sentences that function as the mechanism for communication. However, this process is imperfect, and it is impossible for L to include all the pieces of information she used to create Idea A in the encoding. In order to understand this piece of communication, C must first decode the message. However,

C already has pre-existing thought patterns, which he uses to decode the message. Thus, before C can understand Idea A, this idea must be filtered through his thought patterns. As a consequence, Person C, the receiver, never fully understands Idea A, because he interprets it through his own preconceptions. This framework explains why communication falters within a university, because specialists in different disciplines, by the very nature of their specialization, interpret the world through different mental models.

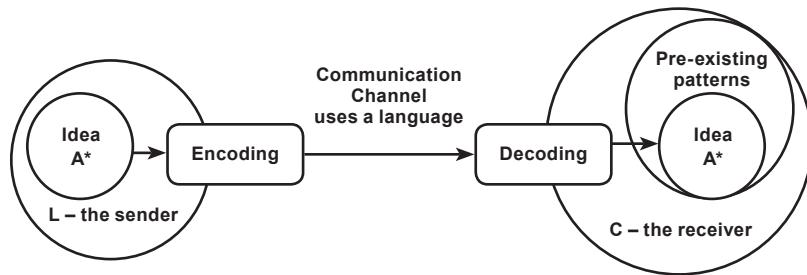


Figure 1: Adapted from Denzau and North (1994, p. 20).

In response to these difficulties surrounding communication, the university serves as an institution to bring together different ways of thinking. Because the requirements for communication between specialists are different than for communication between specialties, the shared mental model that jargon provides must be complemented by a shared mental model of exchange. This is especially true since faculty members are required to engage students who have no specialized training and to introduce them to their field. These faculty members must also engage with one another in order to fulfill Newman's vision of a university community, and to create a division of labor that includes a functional system of exchange.

If we see mental models as languages, then there are essentially three options to achieve effective communication. When both parties have the same mental model (a shared mental model), like speaking the same language, they are able to communicate effectively. Within an individual department in a university communication functions because parties have the same training, and thus the same mental model. The second option is similar to code-switching, when someone who is bilingual alternates between two languages within a given conversation. In order to communicate effectively, both parties do not have to have the same mental model. They do not have to think in the same way, they only need to understand how the other person thinks. If I understand how you think, then like code-switching, I can change how I speak to you so that you receive my intended message. This furthermore does not mean that the two mental models will converge. Successful communication only requires that both sides *understand* the other's mental model so that they can adjust their communication accordingly. The university has the ability to facilitate this type of communication by providing the space for people within different fields to learn the various mental models and update their communication accordingly.

The final role of a university is to offer a shared mental model which serves as a starting point for communication. If we see each field as its own language, then the university provides a third language that everyone speaks when they gather together as a whole. In this way, the university serves as a market maker in order to facilitate trade. The identity and charisma of a university serves as a shared mental model. Thus, when gathered together, everyone within the university begins with the same interpretation of the world, which facilitates communication. In this way, the university provides a shared language, so that when communicating, everyone speaks this third language instead of the jargon of their own discipline.

Voltaire provides an example of the value of a shared mental model where, in the Royal Exchange in London, "the Jew, the Mahometan, and the Christian transact together, as though they all professed the

same religion, and give the name infidel to none but bankrupts" (Arouet de Voltaire 1909). Then, on the weekends, each person returns to his own home and religious tradition, "and all are satisfied" (Ibid.). The Jews, Muslims, and Christians Voltaire discusses live within two worlds and speak two languages: that of their own religious tradition and that of finance. Because everyone can operate within the rules and expectations set by the Royal Exchange, members of different religions act together perfectly well. The university can serve as a sort of Royal Exchange of London by providing a similar type of market space.⁵ The different faculties are like the different religions in Voltaire's description. When they retreat into their research specialties, they use one language, but when they teach or engage with the university community, they ought to reserve the name of infidel only for those who do not participate in the communal pursuit of ideas. In creating a shared space with clear expectations and a shared way of communicating, a university creates a shared mental model to circumvent the problems that arise with different interpretations of the world, because everyone within a particular university has a shared language to speak, beginning the communicative process.

Admittedly, this model may be more realistic in universities with strong institutional identities, such as religiously-based or liberal arts schools. However, Denzau and North's model nevertheless provides a way forward for researchers in universities where a university-wide language may not be realistic. The key lies in ensuring that all members in a given conversation are speaking the same language. This could mean translating into the intellectual language of one's interlocutor, or into a separate shared language, such as the language of a cultural community. Thus, while universities have the ability to provide institutional support for functioning interdisciplinary dialogue, individual actors can nonetheless use Denzau and North's model to allow for functioning dialogue by manipulating their language to ensure their interlocutor understands what they wish to communicate.

III. DIFFERENT MODELS OF TRADE

Up to this point we have discussed the benefits of a division of labor within the university, why we need trade, and why this trade breaks down. But what exactly should this trade look like? Broadly speaking, there are two possibilities, or perhaps two points on a spectrum, to how ideas can diffuse within a society: monopoly or cooperation. The decidedly inferior option is a monopoly, where one group gains enough power to take hold of the dialogue and force its views on the whole of society. Take, for example, Texas' public school curriculum, which for a time incorporated elements that question evolution because of the influence of conservative Christian members on the state's board of education.⁶ Such a move clearly undermines science, which largely supports the theory of evolution. Furthermore, questioning evolution on religious grounds only represents one small, specific religious group. The Catholic Church for example claimed there was no conflict between evolution and the Catholic faith in Pope Pius XII's 1950 encyclical *Humani Generis*. In creating a monopoly on knowledge, one group forces their particular viewpoint on the entire group, thus directly negating the open dialogue Newman's vision of knowledge requires. When any one discipline attempts to describe the entirety of truth, and thus monopolize truth, it risks stepping outside of an accurate description of reality for the sake of the totality of its own interpretation of the world, and directly negates the open dialogue Newman's vision requires.

The alternative model is cooperation. The idea behind this model is simple: if two people or groups want to work together then they will have to make concessions and set aside minor disagreements for the sake of a larger goal. Newman gives the example of a group of Protestants that wish to come together to print and circulate a Protestant Bible (Newman 1904, p. 24). Individual Protestant denominations can come together for a common project due to an overarching similarity, but in order for the project to be successful, they must also set aside their differences. Thus, no one group could include a pamphlet on the merit of good works, a subject to which these groups differ significantly, into this commonly produced Bible. For Newman, when in search of universal knowledge, as is the purpose of the university, it is necessary to make concessions in terms of minor differences for the sake of productive dialogue.

For a modern example, take the Soviet Union and the United States who worked together during the Cold War to eradicate smallpox for fear the disease would enter their own borders. Donald Henderson, the man in charge of the smallpox eradication program at the World Health Organization (WHO) wrote, “there is no question that the smallpox eradication programme could ever have succeeded without the collaborative relationships between the USA and the USSR which survived, and indeed thrived, through some of the most difficult days of East-West antipathy” (Henderson 1998, p. 118). Despite their irreconcilable differences, the United States and Soviet Union came together for a common goal. Henderson offers another insight: “It was the WHO venue that made these relationships possible” (Ibid.). Thus, while even openly hostile groups unite for a common purpose, institutions facilitate this exchange. In this case, the WHO allowed the United States and Soviet Union to cooperate; in terms of the pursuit of knowledge, the university serves as the institution to coordinate the efforts of scholars in different fields.

IV. ECONOMICS AND THEOLOGY

In the final section of this paper, I will apply the model previously set forth to a particular instance of interdisciplinary dialogue: the relationship between theology and economics. The gains from trade between these two fields have been relatively well set forth. While these two fields appear to be vastly different, and in fact they are, these differences in viewpoint and methodology are precisely why they offer value to each other. To begin with theology, Christianity insists that its message has a social component. Since its inception, it has insisted that its followers care for the poor, a claim which today often manifests in discussions of public policy and institutions aimed at addressing both the immediate problem of poverty and the social structures that perpetuate it. However, there is a difference between a particular policy or program claiming to help the poor and it actually doing so. Christian theology alone does not have the tools to determine the best way of addressing a particular problem or whether a policy is working or not. This is precisely the wheelhouse of economics. As Michael Pollitt suggests, “theologians are good on *prophetic* discourse and *narrative* discourse, but need professional economists to help them on *policy* discourse” (Pollitt 2011, p. 14). Thus, economics can help theologians to better understand the concrete ways to address their concerns within the economic sphere.

While economists can help theologians in their hope to address instances and structures of poverty, theologians can help economists to better engage with ethics and the human person. Economists emphasize the difference between normative and positive analysis. To put it simply, normative analysis asks what we should do, giving a directive, while positive analysis simply aims to describe the world as it exists. Most economists argue that their analysis is positive, and thus lies outside the realm of value judgements and morality. The problem with this claim is that economics also exists in the realm of policy making, which clearly asks normative questions.⁷ Thus, if economists want to have a say in what economic policy looks like, they can no longer hide under the coattails of positive analysis and as such must take seriously fields that deal with ethics and the human condition, such as philosophy and theology.⁸

Furthermore, the economic worldview is designed to analyze the economic sphere, e.g. the creation of wealth or the movement of goods and services, and within this realm it does quite well. However, while economic models provide a model of the human person sufficient to explain actions in a marketplace, they are not designed to look at the human person in his/her totality.⁹ As Paul Oslington explains, “Religion is a deep human experience and a limiting case (in much the same way as sex and death (Zelizer 2005), and so can teach us things about human interactions that we would not learn any other way. These lessons can sharpen our understanding of normal economic life” (Oslington 2011, p. 17). Understanding the complexities of the human condition is at the core of religious discourse, and thus theology can provide a fuller understanding of economic actors, both in and outside the market. Furthermore, economists tend to assume that individual well-being will be brought about by each individual's preferences; that is, that everyone, through their choices in a marketplace, will maximize their utility. Religion seriously questions whether this is the case. The human person exists within the economic sphere, but ultimately his/her happiness can-

not come from the transfer of goods and services alone. Or to put it differently, the flourishing of the human person lies outside of what economics has the tools to properly analyze, which is precisely the domain of theology. Thus, as Newman explains, in order to fully understand the human person as a whole (and thus to understand who economic actors actually are), we must look to a variety of disciplines with a variety of methodologies. As such, it is precisely because theology and economics are so distinctly different that the dialogue between them can be so fruitful.

Despite the potential gains from trade between economics and theology, the dialogue between them is filled with animosity and misunderstanding. As we can understand through Denzau and North's model, because their methodologies are so different, theologians and economists have difficulties understanding each other because of their different mental models. Given these difficulties in communication, some authors have found ways to circumvent the challenges in dialogue, particularly through finding a shared language and codeswitching.

One approach to overcoming the language barrier between theology and economics is to choose a shared language between all interlocutors; in this case a common choice is to use the language of devotional Christianity. An example of this is Victor Claar's article, "What I Wish Theologians Understood about Markets and the Economists who Study Them." The article itself is evidence of the difficulties in the dialogue between theology and economics, as it consists of eight points hoping to clear up misconceptions theologians have when dealing with economic research. In his introduction, Claar comments on the disregard that theologians and ethicists display when discussing economics, and he notes, "quite often the criticisms of theologians regarding economics are founded upon a caricature of economics rather than a fuller depiction of it" (Claar 2012, p. 32). To put Claar's observations into Denzau and North's model, theologians are interpreting economists' words through a flawed mental model; that is, their mental model of economists does not match who economists actually are (or how economists see themselves). Thus, if theologians are interpreting economic research through a different lens than the research itself was written, then their understanding of economics will stray from what economists are actually trying to communicate, and per the model, communication will break down.

In an attempt to remedy this situation, Claar addresses certain aspects of the caricature and aims to revise theologians' mental models so that they can more accurately understand what economists are trying to communicate. In this article, Claar does not speak the language of a professional economist or theologian; rather, he speaks as a Christian, using language that one would expect to hear from a pulpit or in a Sunday school class. Claar begins his article: "Christian theologians and Christian economists share much in common. They love our Savior. They care about the plight of the global poor. And they long to be good and faithful stewards of all of God's good gifts to us, including his created order" (Claar 2012, p. 32). By beginning with what Christian theologians and Christian economists have in common, namely that they are Christian, Claar moves the discussion out of the realm of either profession and into a language both conversants understand. In doing so, Claar is able to address some of the difficulties in communication because he ensures that his interlocutors will understand his message by moving the conversation into a language that both parties speak.

Following a similar approach, Samuel Gregg also uses the language of devotional Christianity to explain economics in his book *Economic Thinking for the Theologically Minded*, which per its title is aimed towards explaining theological topics and issues to those who are interested in theology or ministry. Similar to Claar, Gregg also begins his work with a faith claim. He writes "the message of Jesus Christ is addressed to each and every human person" (Gregg 2001, p. 3). Beginning with the notion of Christian conversion allows Gregg to introduce economics as a means of better understanding the Christian life in addressing the social concerns that Christianity maintains. Thus, Gregg frames economics within the larger conversation in the Christian tradition about social justice and responsibility. Doing so allows him both to speak a shared language between him and his readers and to portray economics as neither hostile or foreign to the Christian mission, because Gregg explains it as a tool to better understanding and addressing the social issues that concern Christians. Thus, in their works both Claar and Gregg take similar approaches in

responding to the roadblocks to dialogue, by moving their language into a shared third space that circumvents the troubles with dialogue.

Mary Hirschfeld's book *Aquinas and the Market: Toward a Humane Economy* represents another possible approach, codeswitching, where one seamlessly shifts between two languages, and thus appears to speak both languages at once. Hirschfeld occupies a unique place in the discussion between theology and economics because she has earned a Ph.D. first in economics and later in theology.¹⁰ In laying out the framework for her work Hirschfeld (2018, p. xiv) describes the difficulties she saw in what she calls "theological economics":

Although I was in some sense bilingual, capable of thinking within the economic paradigm and thinking within a theological paradigm, it was far from obvious to me how to go about making the two disciplines mutually intelligible. On reading works on the economy by theologians, it was easy to see how an economist would respond (usually dismissively). It was harder to see how to respond in a way that would do justice to economics while still taking on board the critical insights offered by theologians. Moreover, on hearing about my background, people almost always expressed the expectation that I must have some interesting things to say about just wages or economic injustice. Yet for me, beginning with particular economic issues was a nonstarter. The way I would think about them as an economist was radically different from how I would think about them as a theologian, and so I was left with nothing useful to say at all.

Here Hirschfeld describes the difficulties in interdisciplinary dialogue along similar lines as Denzau and North's analysis of communication. Because economics and theology have different mental models and methodologies, they approach topics from fundamentally different places, which often results not only in their analyses diverging but also leaves the conversant without the tools to understand and constructively contribute to their interlocutor's analysis. Hirschfeld in her work takes up the theology of Thomas Aquinas to argue that the goal in a theologically informed economics is not to pursue goods and services for their own end, but rather to convert them into wellbeing and human flourishing.¹¹ Thus, she establishes a framework that orients the discussion between economics and speaks to the concerns both parties bring to the table. Furthermore, precisely because of her background Hirschfeld speaks the language of both economists and theologians. Thus, while the theology of Thomas Aquinas provides the framework for her analysis, in her discussion of rational choice theory she spells out the payoff matrix for the prisoner's dilemma in much the same way one would in an introductory economics classroom. As such her analysis speaks the language of both economists and theologians and bridges the gap in communication between these two groups. Whereas Claar and Gregg moved the discussion into a shared space where everyone spoke the same language, because of her academic background, Hirschfeld is able to address economists and theologians simultaneously in their own language because she understands the worldviews both groups come to the table with. Thus, these authors demonstrate the various methods available to overcome the communication difficulties between such vastly different fields as economics and theology.

V. CONCLUSION

In conclusion, while both Smith and Newman affirm the benefits and necessity of having different fields, both describe the necessity of trade, which in this particular case takes the form of interdisciplinary dialogue. As Newman claims, while we produce more with a division of labor, without trade, our knowledge is always incomplete, because we only ever see one slice of the world. However necessary, this dialogue breaks down because, by necessity, different fields have different mental models, causing ineffective communication. The university then exists as a market maker, to both create the space for dialogue, so individuals can understand different mental models, and to provide a shared mental model, which provides common ground for dialogue to begin. This dialogue is best achieved through cooperation instead of one group mo-

nopolizing truth. As we have seen with the discussion between economics and theology, communication functions when individuals are open to the benefits of other ways of thinking, and when they find ways to circumvent the differing languages different specialists speak. Thus, the university functions as an institution to pursue knowledge for the greater good of society, and its individual actors participate in that mission, only when it fulfils its original title, with individuals pursuing scholarship and mastery as a community.¹²

NOTES

- 1 Smith goes as far as to say that manufacturing was making much larger gains in productivity than agriculture because we cannot subdivide agriculture as much as manufacturing. Smith, *Wealth of Nations*, I.1.4.
- 2 Michael Polanyi provides a similar argument, arguing that the community of scientists form a community wherein the movement of ideas follows the economic principles for material goods. Within these communities, Polanyi views academic networks as a means of expanding expertise and improving the overall quality of scientific discourse. See Polanyi 2000, p. 7.
- 3 Emily Chamlee-Wright promotes a similar stance, arguing that associational life requires both abrasion, wherein incorrect or incomplete ideas are corrected, and civility, which promotes the functioning of a community. Using Smith's notion of the impartial spectator, Chamlee-Wright argues that developing a mature impartial spectator allows for "intellectual and emotional independence" when interacting within an academic community. See Chamlee-Wright 2019, p. 546.
- 4 Less relevant to our particular focus here, the conversation around the continuing relevance of Newman's *Idea of a University* centers around the goal of a university education. Alasdair MacIntyre argues that Newman's principle question is "What is an educated mind?" and that his goal in a university education is to create an educated gentleman. In contrast, in the modern university, as Turner explains, "within undergraduate institutions that claim to provide a liberal education, academically professionalized training in the arts and sciences is replacing liberal education." Thus, as MacIntyre describes, the modern university is not an indictment of Newman, but rather Newman is an indictment of the modern university because it does not produce the kind of educated mind liberal arts education claims to produce. See MacIntyre 2009, p. 10; Turner 1996, p. 298.
- 5 This example further demonstrates the potential benefits of shared projects to facilitate interactions between groups, which creates an increased potential for innovation from increased contact.
- 6 For a discussion of questions of evolution and public school curriculum, see Williams 2010, pp. 437-454; Armenta and Lane 2010, pp. 76-79.
- 7 It might be tempting for an economist to claim that his/her engagement with policy making is sufficient trade, and that there is little need for engagement with other academic disciplines. However, this response is insufficient on several counts. Once economists enter the normative realm of policy making, their analysis requires engagement with ethics, which in turn requires engagement with disciplines outside of their own. Further, policy making may not address the concerns about the insufficiencies of economics' methodological worldview. Thus, engagement with a diversity of disciplines and modes of thinking will benefit an economist's thought by providing a more comprehensive understanding of the world. This further will improve his/her engagement with policy making, as said economist comes to the table with a more robust understanding of whatever situation is at hand.
- 8 For a similar discussion of the impacts of economics in dialogue with Aristotelian philosophy, see Yuengert 2014, pp. 37-54.
- 9 Another approach is the economics of religion, which analyzes religion through an economic lens. Smith takes such an approach in *The Wealth of Nations*, arguing that religious diversity increases competition, and therefore increases the quality of churches and clergymen, both in the amount of popular devotion and quality of philosophical discourse (V.1.3). In analyzing Smith's comments, Iannaccone finds the empirical evidence supports Smith's logic (Iannaccone 1991, pp. 156-77). Although operating off older data, Iannaccone's article provides an

excellent introduction to the logic of studying religion using economic methodologies. That being said Iannaccone admits that economic models of religion do not reflect the religious community's concerns or self-understanding (1998, p. 1490).

- 10 Another example of a polyglot is Dierdre McCloskey. See McCloskey, 2010.
- 11 Robert Tatum (2017, pp. 63-83) rightly asks *which* theology is at the table when we discuss the notion of theological economics. In response to this issue Hirschfeld chooses to use the language of Thomas Aquinas so that she can enter into the conversation with economics using a single and consistent theological framework.
- 12 This work was supported by the Institute for Economic Inquiry Gail Werner-Robertson Research Fellows program. Special thanks ought to go to Michael Thomas for his invaluable support and mentorship, without which this project would never have come to fruition.

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