To Trade or Not to Trade:

The Pivotal Role of Norms and Reputations in the Marketplace

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"... he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention."

Adam Smith

Table of Contents

Introduction

> "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own self-interest. We address ourselves not to their humanity but to their self-love, and never talk to them of our own necessities, but of their advantages."[1]

This renowned passage from Adam Smith's *Wealth of the Nations* encapsulates one of the fundamental principles underpinning much of classical economics. That principle is—the primary end for which an individual holds himself accountable is with regards to his self-interest. That there is no motivation or driving force more elementary than man's personal benefit as he conducts himself in the free market. This description of the rational selfish individual has been termed *Homo Economicus*.[2] In a world with billions of individuals who each have their own will, the notion of the self-interested agent who maximizes personal interest has been used as the fundamental pillar to explain how human coordination occurs in the market.[3] Indeed, when incentives are aligned and one's personal gain is tied directly to their cooperative behaviour, then *Homo Economicus* suffices as a parsimonious explanation for the actions of people. Yet such conditions are very often not observed in reality. Many times, it would be to one's great advantage not to cooperate with others. Nonetheless, research has shown a proclivity for many people to do the exact opposite, to the detriment of *Homo Economicus*.[4] [5]

[1]Adam Smith, *The Wealth of Nations,* ed. Alan Kreuger*,* (New York: Bantam Classics, 2003), 23-24.
[2]Alberto Ruiz-Villaverde and Dante A. Urbina, "A Critical Review of Homo Economicus from Five Approaches," *American Journal of Economics and Sociology* 78, no. 1 (2019): 63-93.
[3]Daniel M. Hausman, "Philosophy of Economics," *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/win2021/entries/economics/. See Section 1.1. *The Emergence of Economics and Economies.*
[4]Elinor Ostrom, "Collective action and the evolution of social norms," *Journal of economic perspectives* 14, no. 3 (2000): 137-158.
[5]Ernst Fehr, and Urs Fischbacher, "The nature of human altruism," *Nature* 425, no. 6960 (2003): 785-791.

Today, the international free market consists of people from vastly different religions, cultures and backgrounds, who may very well despise one another when they happen to cross paths on the street. Yet, in a market setting, they freely barter goods and services and harmoniously cooperate without the need of a central authority to coordinate behaviour.[6] If *Homo Economicus* is insufficient by itself to explain these interactions, how can one account for such behaviour? This is the paradox that this thesis essays to resolve—given the classic economic assumption of rational self-interested individuals, how does human cooperation between unacquainted people occur at all?

To address the question at hand, this inquiry will examine the case of a virtual marketplace and trading community in the online game known as *Guild Wars 2*. The trading community, known as *The Overflow Trading Company*, is a far more primitive—though not exactly simple—marketplace in comparison to contemporary global markets. Subsequently, the case study allows one to gain insight into how human coordination occurs in the market on a more fundamental level. The way trades are structured on *The Overflow Trading Company* make for a remarkably unique dynamic between traders in the community. Rather than relying on concrete, formal punishments for uncooperative individuals, the community relies on a system of reputations and social norms to regulate interactions between unacquainted traders. While fraudulent activity exists, it is exceedingly rare, which implies that reputations and norms themselves are enough to induce cooperative behaviour in the absence of an overarching authority. Thus, the primary object of this thesis is to argue that a system of reputations built on the adherence to social norms underpins the structure of markets and allow for trading to occur between individuals.

The structure of this thesis is as follows. In Section I, I will introduce the marketplace of *Guild Wars 2* and the unique predicament traders of the community find themselves in.

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[6]Leonard E. Read, "I, Pencil," (1983).

Additionally, I will show why *Homo Economicus* by itself fails to explain the cooperative behaviour that takes place in the market. In Section II, the concept of a reputation is explored and its pivotal role in the trading community is established. Given the vital role of reputations, Section III examines how reputations are built in the marketplace through continually observing social norms. Section III also identifies the complex interrelation that exists between norms and reputations. Section IV relates the findings of the first three sections to the real-world banking system by examining how norms and reputations played a role in the banking industry, particularly during the 2008 financial crisis. In the final segment, there will be a recapitulation of the arguments and a conclusion.

Section I. The Virtual Marketplace

To understand the basis of human cooperation in the market, I will examine the case of trading in the online game known as *Guild Wars 2* and its trading community known as *The Overflow Trading Company* (*Overflow)*. I will begin by explaining the relevant features of *Guild Wars 2* and *Overflow* and the unique predicament that traders find themselves in. Subsequently, I show how classic economic theory fails to explain the cooperative actions of traders in the community.

1.1. Guild Wars 2 and the Trading Post

Guild Wars 2 is a massive multiplayer online role-playing game similar to games such as Final Fantasy XIV, Elder Scrolls Online, and World of Warcraft. Developed by Arenanet, players of *Guild Wars 2* explore a high-fantasy world full of monsters, dragons and other strange creatures. With a player base exceeding 16 million users, it is one of the most popular and critically acclaimed games of its genre. There are many different aspects of *Guild Wars 2*; however, for the scope of this essay, one need only be acquainted with its market and reward systems.[7]

Within the virtual realm of *Guild Wars 2*, players have the opportunity to engage in group events and quests. By actively participating and successfully completing various tasks, players receive rewards. Typically, players are rewarded either with the in-game currency of gold or valuable crafting materials. Crafting materials can be used to produce items such as food, armor, weapons or other equipment which can then be sold to other players. *Guild Wars*

[7] "The Game," Guild Wars 2, accessed June 12, 2023, https://www.guildwars2.com/en/the-game/. Information regarding *Guild Wars 2* and its features is either gathered from its official website or based on personal knowledge from playing the game.

2 incorporates a built-in virtual marketplace known as the *Trading Post,* which allows players to sell items for gold. The *Trading Post* functions on a bid-ask system, akin to real-world securities markets. Whenever players use the *Trading Post*, they suffer a 15% tax on the gold-value of their trade. For instance, selling some *leather* for a total of 100 gold results in 15 gold being lost to taxes and thus yielding a profit of only 85 gold.

It must be noted that the *Trading Post* is the only way players can trade in the game that is officially sanctioned by Arenanet. There is no other direct player-to-player trading system, which makes it unique to other games in its genre. There is, however, an in-game *mailing system* which allows players to send items instantly to one another. This system is not reciprocal by design and was not intended as a means of conducting trades (though as we shall see, it is regularly used for just that). It is also important to emphasize that trading on the *Trading Post* only happens with the in-game currency of gold. When buying or selling an item through the *Trading Post*, you can only use or receive gold. You cannot directly barter one item for another.[8]

1.2. The Overflow Trading Company

The Overflow Trading Company is an independent marketplace established and managed by *Guild Wars 2* players for the purpose of cultivating an alternative trading platform to the *Trading Post*. Utilizing the social media platform Discord, the *Overflow* server has some 27,000 members with over 10,000 active traders.[9] To trade items or currency on *Overflow*, players make a public listing on a text channel in Discord visible to all other traders. For instance, if I wanted to sell some *leather* again, I would make a listing on *Overflow* indicating

[8]Arenanet designed the game so that any trading must go through the 15% tax on the *Trading Post* which severely diminishes the aggregate gold supply in game. This was done as a means of combating the effects of in-game *inflation*—a serious problem in essentially all other games of the same genre.
[9]Overflow Trading Company, Discord Server, June 12, 2023, https://discord.gg/gw2overflow. Information on *Overflow* is gathered from their official Discord server. Some of the more obscure information is based on my personal knowledge of being a long-time member of the community.

the item I want to sell, the amount, and an asking price alongside my contact information. Another player would subsequently contact me to negotiate the details of the trade. Once agreement has been reached, the trade is carried out in-game using the *mailing system*. As aforementioned, the *mail system* was not intended to be used as a trading mechanism and is thus not reciprocal by nature. This means that one of the parties must assume the role of the initial sender. In our hypothetical trade, say I opt to be the initial sender. This implies that I will mail the agreed upon amount of *leather* to the opposing party first. Once the opposing party has received the *leather*, they will then—and only then—uphold their part of the trade and send payment. What follows is a rather unique predicament faced by all traders on *Overflow*.

1.3. The Predicament of Traders on The Overflow Trading Company

The primary dilemma facing traders on *Overflow* concerns the role of the initial sender. No rational individual, given the choice, would prefer to assume such a role for they do not know the intentions of the opposing party. It is entirely possible that, once I send my items to the other party, they will simply disappear without reciprocating or upholding their end of the bargain. Since *Overflow* was established independently by players and is not officially sanctioned by *Guild Wars 2*, the game developers do not issue any punishments to players who engage in fraud when trading on *Overflow*. Malicious actors are thus free to pursue their own ends with impunity from *Guild Wars 2* developers. This is thus the dilemma of trading on *Overflow*. If one freely assumes the role of the initial sender, then they run the risk of being scammed out of an item that, in some instances, can take hundreds or even thousands of hours to obtain. Yet, if no one is willing to bear such a risk, then no trading at all can occur on *Overflow*. What happens then? Here we turn to classical economic theory for some guidance as to how individuals would theoretically act under similar circumstances.

A public goods game is a common experiment in the field of economics. There are many variations on the experiment, but the general premise goes as such: individuals in a community are each endowed with some token or money that they can choose to contribute to a public good wherein everyone benefits regardless of their personal contribution. Typically, they are designed such that if every member contributes their entire endowment, the overall group payoff will be maximized. Conversely, if only a small collective contribution is made, the payoffs are minimal. Classical economic theory posits that individuals will act, not out of some inner sense of benevolence, but in accordance with their own self-interest.[10] Thus, participants will only contribute to the public good if the personal benefits outweigh the personal costs, which, in this instance, only occurs if everyone contributes most of their initial endowment. Since one cannot compel another to contribute to the public good, it is the dominant strategy for the rational, utility-maximizing, selfish individual to avoid contributing anything.[11] Such an individual is free riding off the contributions of others. If there was some external governing body or binding agreement that can guarantee contributions from everyone in the experiment, then individuals would indeed contribute their endowments to the public good for it would maximize personal utility. However, in the absence of such an authority, one is uncertain about the benevolence of others and thus gives nothing. This is what is known as the zero-contribution thesis—should individuals be left to their own devices, they will not act in accordance with the common interest of the group.[12]

To sum, economic theory of a public goods game predicts that no human cooperation occurs for two reasons: (1) the lack of an external authority to compel contributions of participants and (2) the cost of contributions outweighing the potential benefits. For the case

[10] Smith, *Wealth of Nations,* 23-24.
[11] I should note that defecting is only the dominant strategy if the group is sufficiently large as is the case of *Overflow*. See Christoph Hauert, Silvia De Monte, Josef Hofbauer, and Karl Sigmund, "Replicator dynamics for optional public good games," *Journal of Theoretical Biology* 218, no. 2 (2002): 187-194.
[12] Ostrom, “Collective Action,” 137-139.

of *Overflow*, it is evident that the first condition is met. The task now is to figure out whether the personal benefits of trading on *Overflow* outweigh the personal costs.

1.4. The Costs and Benefits of Trading on The Overflow Trading Company

The costs associated with *Overflow* are relatively straightforward. Firstly, there is the cost of time needed to find a buyer or seller, which is not much in most cases, but should nonetheless be factored in. The main cost, however, comes in the form of risk. Every trade on *Overflow* comes with a risk of being scammed by the other party as previously outlined and the cost is thus the chance one has of losing valuable items.

There are many reasons as to why trading on *Overflow* is beneficial. However, for the purposes of this inquiry, I will mainly focus on the increase of efficiency that comes from using *Overflow*—as opposed to the *Trading Post*—as this is considered to be the main appeal. *Overflow* originated from two of the largest trading guilds in the game. The idea behind *Overflow* was to eliminate some of the market inefficiency that arises from the large *Trading Post* tax in the game. Much like the real world, traders on *Overflow* are not overly enthusiastic about paying high taxes and will avoid some if they can. Items on *Overflow* are typically traded for 90% of their *Trading Post* sell price—that is, the price listed on the *Trading Post*. By trading items at this rate, some of the gold that would be otherwise lost to tax is saved. Going back to the *leather* example, if I sell *leather* on the *Trading Post* for 100 gold, then after someone buys the item, I would receive 85 gold after taxes. However, if I sell the same amount on *Overflow*, I would receive 90 gold (90% of 100) and the buyer would only have to pay 90 gold instead of 100. This results in a pareto improvement, for both the buyer and seller are better off trading on *Overflow* than if they were to use the *Trading Post*. The buyer saves 10 gold or 10%, and the seller saves 5 gold or 5%, that would have otherwise been lost to tax.[13]

Another important advantage of trading on *Overflow* is the ability to trade items directly without using the in-game currency of gold. If an individual has an excess of one crafting material, say *silk scraps*, and was in need of another crafting material*, iron ore*, then *Overflow* can be used to find someone to barter the goods directly. If the person in question was to use the *Trading Post* to first sell the *silk scraps* for gold and use the currency to buy the *iron ore*, then they are effectively paying the *Trading Post* tax twice. Firstly, when they sell the *silk scraps* for gold on the *Trading Post*, and secondly, when they purchase the marked-up price of *iron ore*. However, if they trade the goods directly with another trader on *Overflow*, they avoid paying double tax. These two perks of using *Overflow* are the primary benefits traders enjoy as opposed to using the *Trading Post*.

1.5. To Trade or Not to Trade

The public goods game predicts that, (1) in the absence of a governing body, and if (2) the personal cost outweighs the benefit, then no human cooperation occurs. The first condition has been met and here I evaluate the second proposition.

Upon surveying the costs and benefits, it would be absurd to conclude that the benefits of trading on *Overflow* outweigh the cost and induce people to trade by itself. The advantages only result in the trader saving a small percentage of gold value on their trade while the potential losses can be catastrophic. To illustrate this, take the item known as the *Chak Egg Sac* as an example. This is a rare item that the market currently values at around 9,000 gold. For

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[13] While valuing items at 92.5% would evenly split the cost of the *Trading Post* tax among the buyer and seller, 90% was set as the standard out of expediency i.e. to make the arithmetic simpler.

perspective, the average *Guild Wars 2* player has merely 571 gold in their game wallet[14] and can make a meager 20 to 30 gold per hour.[15] A *Chak Egg Sac* can thus be thought of as the equivalent of three hundred hours of work represented in a single item. If one were to sell this item on *Overflow,* they would risk all these hours to save a mere 5% on their transaction. Simultaneously, the opposing party is heavily incentivized to engage in fraud. The trader would thus be relying on the benevolence of a stranger if they were to assume the role of the initial sender. One would be hard pressed indeed to find any exclusively profit-maximizing trader to bear that risk.

It seems that both conditions for the lack of human cooperation are met in the case of *Overflow* and economic theory is thus abundantly clear—no trading at all ought to occur between people. In a world where individuals are motivated by naught but their self-interest, it would be very challenging to see how anyone would gladly assume the role of the initial sender. Trading on *Overflow* therefore appears to be impossible between unacquainted individuals. This, however, is a nonsensical statement, for we observe empirically people doing just that. *Overflow* is an active trading Discord with hundreds of trades occurring daily implying hundreds of people freely willing to bear the role of initial sender. While there are, and always will be, malicious actors, they happen to be exceedingly rare. This paradox of allegedly self-interested individuals cooperating is similarly observed in public goods games where repeated experiments continually show people willing to contribute at least part of their endowment.[16] It is difficult to see how one can reconcile these empirical observations solely with the paradigm of self-interested individuals ubiquitous in classical economics. If classic economic theory in and of itself is insufficient in this quandary, how then are we to explain the

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[14] "Account Statistics," Gw2Efficiency, accessed June 12, 2023, https://gw2efficiency.com/account/statistics/statistics.gold.
[15] These numbers pertain to the general population of the *Guild wars 2* player base. There are a substantial minority of players who can make up to ten times this amount per hour.
[16]Fehr and Fischbacher, "The Nature of Human Altruism," 785-786.

cooperation between unacquainted individuals as seen in both *Overflow* and in a public goods experiment? What maxims drive one to freely bear the role of the initial sender or contribute to the common interest? Or, in a word, how is any trading or cooperation possible at all?

Section II. Reputations: The Groundwork for the Conditions of Trading

To answer the questions previously posed, I will explore a social instrument that is explicitly foundational to the subsistence of *Overflow*. That instrument is a reputation which serves three distinct functions in the market: (1) acting as the primary motive for an act, (2) indirectly capturing one's self-interest and (3) serving as a reliable communicator of information. This section begins by defining reputations and explaining these three vital functions. Subsequently, I examine the system of reputations established on *Overflow* and end by discussing how the three functions play a role in inducing cooperation within the community.

2.1. An Account of the Concept of Reputations

Before one can see the impact of reputations in the virtual marketplace of *Overflow*, one first ought to define what reputations are and their utility. In common colloquial language, a reputation can be defined as the general perception people have about a person, subject or entity. Throughout history, the notion of a reputation has been used in variety of contexts. By examining some of these contexts, one may learn something about the different facets of a reputation.

Traces of the notion of reputations can be found all the way back in Aristotle himself—though he did not use the word explicitly. Rather, Aristotle employs the term *endoxa*—a commonly held belief or some well-established viewpoint—that he uses as a groundwork for his dialectical method.[17] Often times, when we are confronted with challenging situations and

[17]Christopher Shields, "Aristotle," *The Stanford Encyclopedia of Philosophy* (Spring 2022 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2022/entries/aristotle/>.

are at a loss for what to do, one can consult the *endoxa* to gain a sense of direction. The *endoxa* thus functions as the conventional wisdom that has been evaluated by the wise which can be used for guidance.

Much of the history of reputations during the early modern period has been documented by Gloria Origgi.[18] [19] In his infamous work, *The Prince*, Machiavelli considered a cruel reputation "one of the negative qualities that keeps him [the ruler] in power."[20] For Machiavelli, a reputation for cruelty keeps the people loyal and united as opposed to a reputation for generosity and compassion which ultimately leads to disarray. However, this is not to say that a bad reputation is desirable as such. While a cruel reputation isn't exactly conducive to inspiring love from the subjects, the ruler ought to be concerned with not arousing their hatred. This requires the ruler to deeply value the opinions of his subjects and maintaining his reputation to a reasonable degree.

Like Aristotle, Thomas Hobbes does not explicitly use the term reputation but seems to deeply tie his notion of honour with our conception of what we may call a reputation. In *Leviathan*, he writes "The manifestation of the value we set on one another is that which is commonly called honouring and dishonouring. To value a man at a high rate is to honour him; at a low rate is to dishonour him."[21] Hobbes' notion of honour is thus something which is conferred onto an individual solely by others and is related to a person's worth.

During the French enlightenment, thinkers such as Jean-Jacques Rousseau employed the term *amour propre,* that is, self-esteem, as the cause of the inequality among men. For Rousseau, what delineates civilised man from other animals and primitive societies is the

[18]Gloria Origgi, "Reputation in moral philosophy and epistemology," *The Oxford Handbook of Gossip and Reputation* (2019): 69-81.
[19]Gloria Origgi, "A social epistemology of reputation," *Social Epistemology* 26, no. 3-4 (2012): 399-418.
[20]Niccolo Machiavelli, *The Prince*, trans. Tim Parks (Penguin Classics, 2009), 63.
[21]Thomas Hobbes and Edwin Curley, *Leviathan: with selected variants from the Latin edition of 1668,* (Indianapolis: Hackett Publishing Co., 1994), 51.

tendency for man to compare himself to others. In competing with others and striving to supersede his peers, man's sense of himself is shaped by the perception of others and his drive to be admired. As he writes on his second *Discourse on Inequality*:

> "Each one began to consider the rest, and to wish to be considered in turn; and thus a value came to be attached to public esteem. Whoever sang or danced best, whoever was the handsomest, the strongest, the most dexterous, or the most eloquent, came to be of most consideration; and this was the first step towards inequality, and at the same time towards vice. From these first distinctions arose on the one side vanity and contempt and on the other shame and envy…"[22]

Origgi notes that the common trait among many of these early authors is that anything conceived as reputable, this way or that, is some sort of regulator of social relations.[23] There is a social component to oneself that is ever changing as it is dependent on the judgements and perceptions of other people. From Machiavelli to Hobbes to Rousseau, having a cruel reputation, being honoured, or having *amour propre*, positions a person in a social context for better or for worse. While such authors recognized part of the importance of a reputation, it was not until Adam Smith and the arrival of classical economic theory that the pivotal role of reputations was explicitly articulated.[24]

Smith seems to conceive reputations in two different lights: as an indirect interest and as a social passion.[25] When one has an indirect interest in maintaining his reputation, then he is concerned with the benefits that come with having a reputation as such. In other words, he is using a positive reputation as a means of achieving some underlying goal and is only interested in maintaining his image insofar as it helps him achieve that goal. For instance, in a market where information is asymmetric, a businessman ought to be deeply concerned with his

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[22]Jean-Jacques Rousseau and Cole G. D. H, *Discourse on the Origin of Inequality*, (Stilwell, KS: Digireads Publishing, 2005), 45.
[23]Origgi, "Reputation in Moral Philosophy", 74-76.
[24]Ibid.
[25]Ibid.

reputation as an honest and efficient seller lest it impact his profits and livelihood. Marketplaces where trading and cooperation are necessary rely on indirect reciprocity between its constituents.[26] Indirect reciprocity is when regular interactions between people are observed by others and the past actions of an individual are communicated to the community.[27] One's interactions with an individual thus depends on how the individual has conducted himself previously in the group. If a businessman is dishonest and garners a reputation for selling faulty products, this information will be spread through the community and people will not engage with him. Therefore, to sell his product and make a profit, the businessman is incentivized to maintain a respectable reputation. This notion of reputations functioning as an indirect interest is the domain of *Homo Economicus* and is deeply ingrained in Adam Smith's economic theory as a mechanism for ensuring the competitive nature of the market. On a similar note, Machiavelli's cruel ruler is also indirectly interested in his reputation as a means of keeping himself in power. The notion of a reputation in this context as an indirect interest dominates modern day social sciences and is studied in fields such as sociology, economics and signalling theory.[28]

This conception of reputations as an indirect interest highlights another key feature of reputations in general—that feature is, its ability to communicate evaluated information to the group. A reputation is established on the basis of past actions or outcomes to inform others in a social setting about potential future consequences. This facet of reputations is of particular use in our modern age where people are overwhelmed with information about anything and everything. When one must a make choice in a social situation, they often rely on the reputations garnered by different entities out of expediency as it is impossible for one person

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[26]David G. Rand and Martin A. Nowak, "Human cooperation," *Trends in cognitive sciences* 17, no. 8 (2013): 413-425.
[27]Ibid, 414-415
[28] Origgi, "A social epistemology of reputation," 401.

to properly evaluate all of that which lays before him. Aristotle's *endoxa* perfectly embodies this function of reputations. When one is presented with a puzzle, according to Aristotle, they ought to first start with the *endoxa* and work from there.[29] Puzzles can often be ambiguous and lead one off track due to their difficult nature. Thus, one ought to rely on the commonly held opinion as a form of guidance in such situations.

Despite its prevalence in contemporary social sciences as that which one is indirectly interested in, reputations are often viewed in a very different light by other authors and even by Smith himself. In *Theory of Moral Sentiments*, Smith posits that human beings are social beings whose self-interest is, in part, dependent on the passions—emotions—of others. In addition to being an indirect interest, a reputation, Smith contends, is also an end in and of itself:

> "When Nature formed man for society, she endowed him with a basic desire to please his brethren and a basic aversion to offending them. She taught him to feel pleasure in their favourable regard and pain in their unfavourable regard. She made their approval most flattering and most agreeable to him *for its own sake*, and their disapproval most humiliating and most offensive."[30]

Thus, advancing one's reputation need not merely be an indirect interest as previously seen. Rather, it can be conceived of as the primary *telos*—end—of an act. I want to be perceived as the strongest, wealthiest, smartest, for no other purpose than my own esteem. It belongs in this sense, to the same family of social passions including concepts such as glory, dignity, respect, reverence, recognition etc..[31] Among these are the notions of honour, in the Hobbesian sense, and Rousseau's *amor propre*. It is important to note, that as a motivator of actions, such passions have been extremely prevalent throughout history. For instance, when people pass away, they are often deeply concerned about their reputation, legacy, and the continuation of

[29] Shields, "Aristotle".
[30] Adam Smith, *Theory of Moral Sentiments,* ed. Jonathan Bennett, (2008), 65, emphasis added.
[31] Origgi, "A social epistemology of reputation," 403.

their family line hence why they built large monuments and tombs. Honour, in the general sense, was a guiding principle for many a historical figure who often valued it more than their own life.[32] In other words, people pursue these social passions often at the expense of personal utility or well-being. Reputations as a social passion can thus be an incredibly powerful basis for the social interactions of people within a community.

To sum, this little expedition into the notion of reputation as seen through different authors in history has given rise to three of its different facets: reputations as an indirect interest, a way to communicate evaluated information, and as the primary motivation behind an action. What is interesting is how such qualities can seemingly exist simultaneously. A businessman can pursue his reputation as an end in itself by engaging in charitable work to be seen as an admirable, selfless individual. Simultaneously he may pursue a reputation of being a reliable, and trustworthy to signal to potential business partners while being indirectly interested in making profit.

2.2. The Reputation System of the Overflow Trading Company

Before one can see how these three facets of reputations are active on *Overflow*, a brief interlude is necessary to explain the basic features of the reputational system on *Overflow*. In the virtual marketplace, the reputation system is foundational to its existence and everyday operations. It has been observed in other contexts that when repeated interactions between members of a community are observed, humans will reward cooperative behaviour with a positive reputation.[33] Such is the case of *Overflow*. Whenever a trade is successfully conducted on the platform, it is documented and contributes to one's reputation. The documentation of

[32] A prime example of this would be the legend of the death of Roman general Marcus Atilius Regulus during the First Punic War.
[33] Rand and Nowak, "Human cooperation," 414-415.

trades is done through what is known as a trade review. Trade reviews function similarly to reviews on platforms of online retailers or Airbnb reviews. They serve as a public declaration that establishes your credibility and dependability within the community. A typical trade review includes details about the individuals involved in the transaction, the traded items, and the corresponding gold-value of the items. A person's reputation is dependent on the total gold value he has traded, and the number of trades conducted. More total gold-value and more interactions with different people make one a more reputable person. Note that when one leaves a trade review, it bolsters the reputation of all the parties involved in the transaction, including the individual who writes the review. After a trade review is posted, all involved parties must affirm the review by giving the post a check mark.[34] Trade reviews without any check marks are considered invalid. If a person has garnered enough trader reviews to their name, they may apply for a trading rank. A trading rank displays a badge next to your username visible to all other traders. Below are all the ranks on *Overflow* alongside their requirements:

Table 1: The Reputational System on the Overflow Trading Company

Rank	Requirement
5k	Minimum 5,000 gold traded over at least 10 trades
25k	Minimum 25,000 gold traded over at least 25 trades
50k	Minimum 50,000 gold traded over at least 50 trades
100k	Minimum 100,000 gold traded over at least 100 trades
500k	Minimum 500,000 gold traded over at least 175 trades
1 Mil	Minimum 1,000,000 gold traded over at least 250 trades

Source: "Trade Rules" channel from Overflow Trading Company, Discord Server, June 12, 2023, https://discord.gg/gw2overflow.

[34] This is done by using features available on Discord.

Once a trader meets the requirements for a specific rank, they need to submit an application to the *Overflow* administration that contains all their relevant trade reviews. The application is manually reviewed and if all requirements are met, the trade rank is granted. The evaluations of applications for trade ranks are an essential part of the reputation system on *Overflow* as they ensure the legitimacy of an individual's trade rank. They bestow a sense of status unto the individual who obtains it that is—quickly—communicated to all other members of the group. Without such a feature, traders would need to manually look for the trade reviews of their opposing party as proof of their credibility, which can be difficult and time consuming. Thus, if a trader had the choice of buying an item from a ranked individual versus an unranked one, they would most certainly prefer the former to the latter for they know that the ranked trader has been officially corroborated by an *Overflow* administrator.

2.3. How Reputations Induce Human Cooperation on The Overflow Trading Company

Here we see how the three facets of reputations are infused in the operations of *Overflow* as a trading community. Firstly, and simply, as an indirect interest, traders are motivated by their drive to increase profits to maintain an honest reputation and not engage in fraud. Not only does their reputation allow them to trade with others, but if they acquire a high trade rank, it can give them a competitive edge over other, lower ranked traders.

Next, we consider the reputation system as a way of effectively communicating evaluated information. On *Overflow*, this evidently comes in the form of the trade ranks which signal one's reputation to the entire group. This allows traders to make informed judgements about whether they should engage in trading with one another. Rather than merely engaging in guesswork about the intentions of other traders, traders rely on the *endoxa* of the community concerning the status of a given individual. This facet of a reputation greatly reduces the risk one has of being scammed and is one of the key components that allows one to confidently engage in a trade.

While these two facets of a reputation play a large role in motivating human cooperation between traders on *Overflow*, I maintain that the third facet—a reputation as an end in itself—is the most prominent factor. Should a trader on *Overflow* engage in fraudulent activity, that is, if they do not reciprocate a trade or do anything of the sort, then they will be blacklisted in the community. Subsequently, their entire reputation and all of their trade reviews will be nullified permanently. This carries with it social consequences for the individual. To start, the services of *Overflow* will no longer be available. Moreover, the *Overflow* blacklist which—among other things—includes a list of individuals who have violated a trade agreement, is shared with many different communities of *Guild Wars 2*. Being blacklisted on *Overflow* thus carries over into other social aspects of the game. In other words, the primary sanction one faces when engaging in fraud on *Overflow* is public shame and the destruction of one's reputation. Many of the traders, especially of the higher ranks, regularly conduct business with one another. Some are rather close friends who have known each other for many years. Being blacklisted and having one's reputation ruined can thus be detrimental socially to your relationships with others. Given that there are no formal consequences issued by *Guild Wars 2*, the destruction of one's reputation and its social implications are the sole forces that deter traders from scamming one another apart from loss of future profits brought about by the first facet of reputations. The first facet, as previously discussed, is insufficient by itself to explain why one does not scam other traders. Meanwhile, the second facet is only applicable once trading has already occurred repeatedly and thus cannot be used as the basis for understanding human cooperation to begin with. It is only in the third facet, where one pursues their reputation as an end in itself, where one can properly explain the human cooperation that takes place on *Overflow*.

Overall, traders on *Overflow* engage in human cooperation when trading lest they incur a bad reputation for scamming others. Many traders on *Overflow*, especially those of the higher ranks, value their reputation and social bonds on the server far more than any monetary or gold value that could ever be offered to them.[35] Conducting business in the marketplace cannot therefore merely be reduced to rational individuals seeking to maximize personal utility. Rather, there is a reputational element of their actions that they are beholden to which makes trading possible. The profits one enjoys from trading are but a side effect that contributes to their cooperative behavior but does not ultimately explain it.

2.3.1 A General Remark on the Motivations of Cooperative Behavior

In this section I wanted to emphasize that one's reputation as a social virtue can be pursued as the primary ends when trading on *Overflow*. However, this emphasis on social passions as the motive for actions does not exclude the possibility of other altruistic or ethical motives as the grounds for action. That is to say—it is entirely possible that traders on *Overflow* are engaging in human cooperative behavior due to non-selfish or moral reasons i.e., in the name of honesty, fairness, integrity, etc. as well as for the sake of social passions. In public goods games, there is even some evidence to support this notion of human cooperation based on moral motivations.[36] While such drivers are undoubtedly important, the case of *Overflow* specifically illuminates reputations as the main driver of cooperative behavior. Thus, while alternative non-selfish motivations should be included in the broader discussion of human cooperative behavior, they are overshadowed in this case study by the pursuit of one's reputation. Indeed,

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[35] Many of the larger traders have said so publicly on multiple instances.

[36] See Ernst Fehr, and Urs Fischbacher, "Why social preferences matter–the impact of non-selfish motives on competition, cooperation and incentives," *The economic journal* 112, no. 478 (2002): C1-C33.

it may be an interesting area of research to see to what degree agents in a free market are acting out of reverence for the moral law, but this ultimately goes beyond the scope of this thesis.

Section III. Observing Social Norms as the Prerequisites of Systems of Reputations

In the previous section, the concept of reputation and its three facets were introduced. It was established that the primary aspect of a reputation that cultivates a trading environment was its facet of being pursued as an end in itself. In this section we delve deeper into how reputations themselves are established in the market and subsequently, how trading persists. First, I define what a social norm is and take a look at norms in the marketplace of *Overflow*. Next, I argue that reputations are established and maintained through the observance of social norms in communities. On *Overflow*, there are two unique norms that facilitate the establishment of reputations—the norm of who assumes the role of initial sender, and the norm of leaving trade reviews. I end the section by discussing how these norms work in harmony with reputations to cultivate cooperative human behavior and a healthy marketplace.

3.1. Social Norms: Navigating the Unwritten

A social norm can generally be defined as a tacit set of rules or behaviors that a group observes or forbids through sanctions.[37] Sanctions can either be positive or negative depending on the context. For instance, observing proper table manners may leave a positive impression on the host or hostess. On the other hand, showing up to a job interview in shorts and a tank top will, in most likelihood, hinder one's chances of landing the position. In both instances, observance or infringement upon the norm implied either positive or negative consequences for the individual in question. It is important to note that there is no formal mandate requiring an individual to wear a suit to a job interview or chew their meal with their mouth closed. Rather,

[37]Cristina Bicchieri. "Norms, conventions, and the power of expectations," *Philosophy of social science: A new introduction* (2014): 208-229.

the norms are implicit and unspoken but are nonetheless known by all people in a social context. This unspoken element of social norms is one of its key features. Norms are not behaviors that we discover by studying a formal rulebook but are actively learned through repeated interactions in different social situations.[38] Apart from positive and negative, sanctions may also simultaneously take the form of internal or external. External sanctions are when there is a direct reprisal of your behavior by others, such as the case of being inappropriately dressed for an interview. If sanctions, however, are internalized, then they are integrated directly into one's value system.[39] One wears a suit to an interview because they believe in dressing appropriately and any external sanctions, positive or negative, are of little consequence to his intrinsic motivation.

Cristina Bicchieri notes that the issue with the abovementioned definition of social norms is that it blurs the lines between what we merely consider a convention and norm. Conventions are behaviors we adopt that are in coordination with the group as a consequence of aligned interests.[40] If one wanted to travel by car, it would be advantageous for everyone to drive on a particular side of the road. Thus, the convention of only driving on the right was developed in most countries and it is in every individual's private interest to adhere to it. Norms on the other hand, are, in many cases, in contrast with an individual's personal interest. One may despise wearing a suit to an interview but will nonetheless spend the extra thirty minutes in the morning to properly knot his necktie lest he suffer the consequences. This conformity to social norms is a direct result of a normative component that is not present in conventions.[41] Bicchieri terms this the normative expectation which occurs when individuals believe that the majority of a population believes that people ought to adhere to a certain behavior. This is

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[38]Bicchieri. "Norms, conventions, and the power of expectations," 212.
[39]Ibid, 212-213.
[40]Ibid, 216.
[41]Ibid, 225.

contrasted with the empirical expectation which states that individuals believe that the majority of a population adheres to a norm. Note that the normative expectation is one's belief about other people's beliefs—that is, a second order belief—regarding what behavior is or isn't permissible. Conversely, the empirical expectation merely concerns one's personal belief about the behavior of others. Conventions consist only of the empirical expectations, while norms include both the empirical and normative.

Lastly, a brief distinction between social norms from moral and legal norms ought to be made. A moral norm is that which ought to be followed unconditionally[42] while social norms are conditional. People can choose to adhere to the social norm if they wish but can opt not to without infringing upon the moral law. Additionally, some individuals, due to circumstance, may be unable to conform to a social norm. This, however, does not necessarily exempt them from the sanctions that they could suffer. Being unable to afford a proper suit does not mean—necessarily—that the interviewer will grant amnesty for the norm transgression. In contrast, observing the moral law—at least in the Kantian sense—always suggests that the individual in question is fully capable of acting in a certain manner. As the adage goes, *ought implies can,*[43] meaning that if an action is to be considered moral, an individual must be capable of executing it. Meanwhile, legal norms rather than being unspoken and informal as is the case of social norms, are the exact opposite. They are explicit mandates that are articulated and codified by an overarching governing body. Whereas social norms specify what a person should do in a given context, legal norms—more often than not—dictate what one shan't do.[44] Similarly, punishments for transgressions are formal and specific, whereas sanctions of social norms are vague and informal.

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[42]Bicchieri. "Norms, conventions, and the power of expectations," 209.
[43]While Kant did not use this phrase verbatim, it is often attributed to him. See Immanuel Kant, *Critique of Pure Reason*, trans. Paul Guyer and Allen W. Wood. (Cambridge; New York: Cambridge University Press, 1998), A548/576.
[44]Bicchieri. "Norms, conventions, and the power of expectations," 209.

3.2. Norms On the Overflow Trading Company Marketplace

Elizabeth Anderson articulates five social norms that are generally present in market settings.[45] They are: impersonality between parties, individual pursuit of personal benefit, the exchange of private (non-excludable and non-rivalrous) goods, subjectivity in evaluating goods, and expressing dissatisfaction through exiting. While these norms are generally observed on *Overflow*, there are two other social norms unique to the trading community that play an integral role in the everyday business that is conducted on the server. These two social norms are the norm of leaving trade reviews following a successful transaction, and the norm that dictates who ought to assume the role of the initial sender.

Trade reviews help document a trader's history of transactions on the server. However, what is peculiar about them on *Overflow*, is their existence as a social norm. When one conducts a successful transaction, it is fully expected that at least one of the involved parties leaves a review of each other (the empirical expectation). Moreover, it is the general sentiment in the community that traders ought to leave a review ensuing a trade (the normative expectation). This is done as a token of good faith between the parties involved, similar to how satisfied guests leave positive reviews for a resort they've stayed in. In both instances, reviews are done at the behest of the trader or customer and are not mandated by an external authority. Additionally, the trade review norm need not be followed unconditionally. There are instances when the transaction between traders does not transpire smoothly due to reasons other than fraud. In such cases, the opposing party may simply choose not to leave a review or refuse to affirm a trade review for any reason they deem fit. The positive sanctions that arise from the trade review norm are twofold. Firstly, leaving a positive review for another trader increases one's rapport with other individuals, which may be of value if you repeatedly encounter the

[45]Elizabeth Anderson, "The ethical limitations of the market," *Economics & Philosophy* 6, no. 2 (1990): 179-205.

same people. The primary positive sanction, however, comes in the form of direct reputation establishment that is cultivated by this norm. Without the norm of leaving a review for other people it would be impossible for traders to regularly establish themselves on the server as a reliable member of the community. This norm thus allows people to build their reputations and ultimately pursue it as an end in itself.

The other unique norm of *Overflow* determines which party will assume the role of the initial sender. Given that one's reputation on *Overflow* communicates information concerning the status of the individual, it has become the norm for people who have less trade reviews to their name to bear the role of initial sender. In practice, this implies that he who has a lower trade rank sends their items first. Like the trade review norm, this norm holds the empirical and normative expectations. A *100k* trader expects that a *25k* trader will be the initial sender during a trade as the *100k* trader has proven himself to a greater extent than the opposition. Furthermore, this norm is not moral or legal as it need not be followed unconditionally and is informally understood between traders. Often times when two people are trading, the topic of who sends their items first is not even discussed. The social norm is tacitly known in the community and its impetus is enough to compel cooperation without any direct communication. The positive sanctions of adhering to this norm, like the previous one, is gaining reputation in the community. If one is disinclined to follow the norm, it may result in negative sanctions as the opposing party may overtly refuse to engage in the transaction.

On the surface the reader may wonder why the norm of reciprocating a trade is not counted among the other social norms of *Overflow*. After all, reciprocation during trading appears to meet both the empirical and normative expectations and failure to comply is punished with informal sanctions characteristic of social norms. There is, however, a distinction. When trading, one has willingly agreed to a transaction and has bounded himself to the terms of the trade. Thus, he ought to unconditionally hold to such terms lest he be faithless. It is clear that the norm of reciprocation is not social, but moral, for its transgression is fundamentally wrong.

3.3. The Interplay between Norms and Reputations

The two norms of *Overflow* reveal the fundamental manner in which reputations are established and maintained—that is, through the continual observance of social norms. It is only through this unique relationship between norms and reputations where one can paint a complete picture of how trading is possible.

In the beginning, people pursue a respectable reputation as an objective in itself. They want to be perceived as a trustworthy, honest trader, or, perhaps more accurately, they do not want to be seen as a false individual. To help establish their reputation, the norm of leaving a trade review was developed. Not only does the norm affirm one's status as a trustworthy trader, but by regularly documenting the history of one's actions it also communicates important information to the group. This norm thus enables two of the facets of reputations—the facet of being a social passion and the facet of communicating information. The documentation of former actions is then complemented by the second unique norm which decides who bears the role of the initial sender. This norm is one of the other key components that makes trading between strangers possible. Once reputations are established and the status of an individual is made known, then the second norm allows new traders to confidently engage in trading without fear of losing items. Here, the explanatory power of classical economic theory increases dramatically. Rational self-interested traders who are new to *Overflow* may effectively eliminate the risk of being scammed by choosing to solely trade with ranked individuals. It must be stressed this classical economic assumption only holds merit after individual reputations are determined and cannot solely be used as the source for explaining cooperative human behavior. Furthermore, the second norm confers a sense of status and power unto the trader who has a higher reputation. A new trader is incentivized, to some extent, to obtain an immaculate reputation as a means of reaping the benefits that come with acquiring a higher trade rank. This norm thus enables the other facet of reputation as being that which one is indirectly interested in.

The case of trading on *Overflow* exemplifies the relationship between norms and reputations. Adherence to norms establishes reputations and reputations retain the information of past actions of an individual. Here we may appropriate the famous words of Kant to better describe this interrelation: norms without reputations are *empty* and reputations without norms are *blind*.[46] Norms without reputations are empty since, without reputations, the adherence to a social norm will be naught but an isolated act that follows some vague set of rules. Reputations connect these isolated acts of adherence in a meaningful way that confers status upon a person. In some sense, reputations remember the effort one puts in to following the social norm. On *Overflow*, this is manifested in the social norm that determines the initial sender. On the other hand, reputations without norms are blind. Any reputation established in the absence of obeying norms is foundationless for norms are what breathe life into the three facets of reputations as previously seen. To trust a reputation without norms would be akin to the blind obedience of a child to their parents. One needs to observe social norms for a reputation to have any merit, otherwise the reputation is a farce. Ultimately, it is this interwoven relationship between norms and reputations that works together in the market of *Overflow* that allows it to function. And it is in this relationship where we find the answer to the question originally posed at the start of this inquiry.

[46]Kant, *Critique of Pure Reason*, A92/B125. Note, Kant is making an entirely separate point about intuitions and concepts. I am merely appropriating the phrasing that he uses.

Section IV. From the Virtual Landscape to Reality

In this section, we transcend the virtual world and see how the system of norms and reputations are utilized in the real-world banking system. I consider the case of the 2008 financial crisis and the role norms and reputations played in it.

4.1. The 2008 Global Financial Crisis

All this talk of virtual marketplaces and trading in an online game may seem of little relevance to real world events. After all, contemporary financial institutions are far more complex and are subject to formal government regulations unlike the market of *Overflow*. There was, however, a time when it was not so. For much of human history, the banking industry was completely dependent on reputations.[47] Rather than having the government regulate behaviour, banks were compelled to be financially responsible, privately and socially, by the public opinion. As one author put it:

> "For much of the nineteenth century, private banks, mostly family owned and some very international, bestrode the world of finance with little more to entice a small number of exclusive well-off clients to use their tailored, high margin services than *their reputation for reliability and savvy judgment*. But today much of the volume of transactions has become routine, highly technical (mathematical), ostensibly protected by strict law, or so short term that *trust hardly enters into clients' decision process about the banker* with whom they should do business."[48]

But how did the banks establish their reputations as such? Consider the house of Morgan, from which the large international bank J.P. Morgan & Co. originates. In the 19th century, the house

[47]Christopher Kobrak, "The concept of reputation in business history," *Business History Review* 87, no. 4 (2013): 778-786.
[48]Kobrak, "The concept of reputation," 778, emphasis added.

of Morgan garnered a reputation for reliability and trustworthiness that was slowly developed over time. They did so by initially making small, sound financial decisions with clients to gain their favour and later move to larger, riskier ventures.[49] To put it differently, the house of Morgan had to observe the norm of banks making competent financial decisions and were subsequently rewarded with an immaculate reputation. Since such a reputation required a great time investment to obtain, the Morgans went to great lengths to maintain it.[50] As a consequence, they became one of the most successful international banking families in history that still persists in some form to this day.

The case of the Morgans and the history of banking go to show how reputations and norms were at work in the earlier days of financial institutions in the 19th century. With the turn of the century however, we saw major shift in the banking industry as government regulation started to become more prominent.[51] [52] When the stock market crashed in 1929 and the Great Depression ravaged the banking sector, the United States government stepped in with regulations to bolster the failing banking industry. The Federal Deposit Insurance Corporation was created as a direct response and insured the bank deposits of citizens in the event of bankruptcy.[53] All the regulations and new government institutions designed to protect the savings of citizens spelled the end of the era of reputations as the prime regulator for banks. Despite being separated by some seventy years, this shift of regulatory approach in the banking sector sets the stage for the 2008 financial crisis.

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[49]J. Bradford DeLong, "Did JP Morgan's men add value? An economist's perspective on financial capitalism," In *Inside the business enterprise: Historical perspectives on the use of information* (University of Chicago Press, 1991), 205-250.
[50]Ibid, 217-218.
[51]Jerry W. Markham, "Banking regulation: its history and future," *NC Banking Inst.* 4 (2000): 236.
[52]Caroline Fohlin, "A Brief History of Investment Banking from Medieval Times to the Present," *The Oxford Handbook of Banking and Financial History* (2016): 161-165.
[53]Markham, "Banking regulation: its history and future," 236. Most countries, including the Netherlands have an FDIC equivalent.

In 2008, the bursting of the housing bubble plunged the world into a catastrophic financial crisis that took many years to fully recover from. Years prior to the financial crisis, banks were guilty of engaging in excessively risky investments and issuing bad loans known as sub-prime mortgages.[54] Banks were able to pursue such activities with impunity due to the government safety net that regulations provided. Furthermore, ratings agencies, which are designed to assess the reliability of financial entities to pay back debt, gave favourable ratings to securities backed by these risky sub-prime loans.[55] These positive ratings gave a false sense of safety to people who were engaging with such financial entities. These factors, among *many* others, contributed to the collapse of the financial system and one of the worst economic disasters in history. As a direct consequence, many in the public lost faith in financial institutions and more government regulation was introduced to reintroduce financial stability.[56]

I maintain that, at its core, the Great Recession was a consequence of the disconnect between banks observing norms and their reputations. In the past, banks tended to their reputation by engaging in sound financial investments and not overexposing themselves to risk—the house of Morgan being a prime example. In years leading up to 2008, banks transgressed such norms without suffering any sanctions towards their reputation. Not only that, but banks were also able to maintain their status of reliability due to rating agencies favourably assessing the mortgage-backed securities they issued. Here, the case of reputations without having the norms to support them is manifested. Many people turned a blind eye in years leading up to 2008 and had faith in the system. They blindly trusted the reputations of the banks with paying little attention to what norms banks observed to obtain their reputations

[54]Sher Verick and Iyanatul Islam. "The great recession of 2008 - 2009: Causes, consequences and policy responses," *Institute for the Study of Labor*, Discussion Paper No. 4934 (2010). See page 14 for an instructive chart outlining the different factors that went into the 2008 crisis.

[55]Lawrence J White, "Markets: The credit rating agencies," *Journal of Economic Perspectives* 24, no. 2 (2010). See pages 220-222 for the role credit rating agencies played in exacerbating the subprime loans.

[56]Kobrak, "The concept of reputation in business history," 778-780.

in the first place. Under the old regime of unregulated banking, banks would not have been able to engage in unsound financial investments lest they lose their clients and go out of business. Let 2008 serve as a reminder of the importance of the relationship between norms and reputations. The banks, as independent agents acting in the market, depend on this interrelation of norms and reputations to properly function. When this interrelation is compromised, it has detrimental consequences for the entire market. In 2008, these consequences manifested themselves as the collapse of the entire financial system.

4.2. On the Relevance of the Virtual

In contemporary financial markets, the relationship between norms and reputations is obfuscated by the size and complexity of the global economy. Trading in *Guild Wars 2* presents a simplified version of global financial markets in a way that allows one to gain insight into the fundamental social mechanisms that enables the market. The norms on *Overflow* are unique in that their observance is formally and explicitly linked to the reputational system. Typically in markets, reputations and norms are informally related. When the house of Morgan observed certain norms, their image in the eyes of the public improved significantly. Such a reputation however is informally based on public perception and is not necessarily universally recognized. Meanwhile, on *Overflow*, the reputational system is formally linked to its social norms. Leaving a trade review, for instance, officially advances one's reputation in a way that is quantifiable and universally acknowledged by all members of the community. This explicit and formal link between the two social instruments is what separates *Overflow* from contemporary financial markets and is also what provides the deepest insights into the functioning of markets.

Concluding Remarks

The trading community known as *The Overflow Trading Company* in the online game *Guild Wars 2* provides key insights into how cooperative human behaviour occurs in the marketplace. It does so through its unique trading structure and system of norms which sheds light on the motives of people. Traders on *Overflow* do not merely act in accordance with their private interest—rather they choose to pursue their reputation as a social passion which serves as the primary *telos* for their actions. Not only that, but a trader's reputation simultaneously acts as that which one is indirectly interested in as a means of maximizing personal profits. Lastly, reputations in the market communicate evaluated information to the group which allows members to judge whether the opposing party is a malicious actor. To establish one's reputation, *Overflow* has developed two unique social norms which directly contributes to people's reputations. The first norm expects traders who have successfully traded with one another to leave a review as a token of good will. This norm establishes a trader's reputation by publicly documenting their past actions. The second norm dictates who assumes the role of the initial sender which confers a sense of status onto he who has a higher reputation. The two norms work together to activate the three facets of reputations. Reputations require the observance of norms in order to have merit, while norms require reputations to document who adheres to them. The banking industry used to be built on this relationship of reputations and norms in the pre-regulated era. However, once this relationship was compromised and reputations were maintained without the underlying norms to support it, the entire financial system collapsed in one of the worst economic disasters in history. Thus, the question originally posed at the start of this inquiry can now be resolved. Cooperative human behaviour occurs due to individuals adhering to norms which subsequently builds the reputations of members in the community.

The explanation provided by classical economics does indeed have a place, but one ought to recognize the importance these two elements have in the functioning of markets.

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