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Encouraging Trust and Cooperation in Digital Negotiations

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Encouraging Trust and Cooperation in Digital Negotiations

Abstract

One of the most important issues in modern society is how society modifies the way in which its members develop relationships and foster cooperation in the face of new communication technologies. I explore theoretical and empirical parameters of this process and their implications for encouraging trust and cooperation in negotiations.

I begin with an argument for the role of trust and cooperation as part of the foundation of digital commerce by expanding the reach of the social contract theory (ISCT) of Donaldson and Dunfee (1994; 1999). I argue that a digital community is a community in the ISCT sense, and that the basic framework of ISCT can apply to the digital business world. I then analyze the roles of trust and cooperation within this framework, explaining their moral relevance for e-commerce.

I follow this discussion with two empirical papers to begin to uncover the nature of digital norms. In "Negotiating with the Millennial Generation" I use a series of behavioral studies and online chat analyses to show that people build trusting relationships online, often resulting in more cooperation than when they talk face to face. I then look at what type of texting creates stronger relationships, showing that longer texting conversations that go beyond small talk generated greater trust and rapport. I also use a behavioral study involving a smartphone application to discuss how over time people learn to use new forms of communication to build trusting relationships through digital media.

In the third paper "Why the F*** Don't They TRUST" I develop the notion that particular behaviors can affect online trust development. Using analyses of online texts and additional behavioral studies I show how norm-defying online incivility decreases trust while norm-abiding use of capital letters does not. I show that encouraging people to abide by civility norms develops more trusting and cooperative online environments.

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ENCOURAGING TRUST AND COOPERATION IN DIGITAL NEGOTIATIONS

Livia Levine

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If I have seen further than others, it is by standing on the shoulders of giants.

– Isaac Newton

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It is not what one says, but rather what one does, that makes all the difference in the world.

-Rabbi Shimon, Ethics of the Fathers

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I'm not the smartest fellow in the world, but I can sure pick smart colleagues.

-Franklin D. Roosevelt

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From all my teachers I have learned, but from my students most of all.

-Rabbi Hanina, Babylonian Talmud

The motivation for this dissertation topic came from the students of a negotiations class taught by Ken Shropshire. When I assisted in this class I saw the way students interacted through digital communication and noticed a contrast between their reality and the academic theories. Further discussions with these and other students gave me a window into understanding a new generation, which inspired the theories and studies in this dissertation.

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May your family be as dear to you as your friends and your friends be as important to you as your family.

-Grandpa Paul Crounse

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The very last is the most precious.

-Midrash Breishit Rabba

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ABSTRACT**ENCOURAGING TRUST AND COOPERATION IN DIGITAL NEGOTIATIONS****Livia Levine****Diana Roberston**

One of the most important issues in modern society is how society modifies the way in which its members develop relationships and foster cooperation in the face of new communication technologies. I explore theoretical and empirical parameters of this process and their implications for encouraging trust and cooperation in negotiations.

I begin with an argument for the role of trust and cooperation as part of the foundation of digital commerce by expanding the reach of the social contract theory (ISCT) of Donaldson and Dunfee (1994; 1999). I argue that a digital community is a community in the ISCT sense, and that the basic framework of ISCT can apply to the digital business world. I then analyze the roles of trust and cooperation within this framework, explaining their moral relevance for e-commerce.

I follow this discussion with two empirical papers to begin to uncover the nature of digital norms. In “Negotiating with the Millennial Generation” I use a series of behavioral studies and online chat analyses to show that people build trusting relationships online, often resulting in more cooperation than when they talk face to face. I then look at what type of texting creates stronger relationships, showing that longer texting conversations that go beyond small talk generated greater trust and rapport. I also use a behavioral study involving a smartphone application to discuss how over time

people learn to use new forms of communication to build trusting relationships through digital media.

In the third paper “Why the F*** Don’t They TRUST” I develop the notion that particular behaviors can affect online trust development. Using analyses of online texts and additional behavioral studies I show how norm-defying online incivility decreases trust while norm-abiding use of capital letters does not. I show that encouraging people to abide by civility norms develops more trusting and cooperative online environments.

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PREFACE

One of the most important issues in modern society is how, in the face of new communication technology, its members modify the way in which they develop relationships and foster trust and cooperation. As people rely more heavily on emails, instant messages, and text messages, they become accustomed to using these media to establish trusting relationships. I explore theoretical and empirical parameters of this process and their implications for encouraging trust and cooperation in negotiations.

Cooperation and Trust

Norms of cooperation and trust are necessary for promoting society's aims by facilitating community members' working together to more effectively pursue collective goals (Putnam, 1995). With norms of cooperation, communities can provide more collective goods and experience higher group welfare (Hollander, 1990). Additionally, having generalized norms of cooperation encourages participation in social exchanges and motivates people to contribute to knowledge exchange, making cooperative norms a "foundation of the creation of intellectual capital" (Lesser 2000, Putnam, 1993). Trust promotes cooperation, which in turn promotes greater social capital (Cohen and Prusak, 2001). I discuss the importance of trust and cooperation norms – particularly as they apply in a digital context – at length in the first paper.

Digital Age

Trust and cooperation are critical aspects of society's functioning well, and the focus of contemporary society is shifting to digital communication and interaction. We see anecdotally that people young and old (particularly Millennials, born after 1982 (Howe and Strauss, 2007)) are comfortable with digital messaging in a way that emerged over the last decade. Whether at bars (Stein, 2011) in church (Vattaturni, 2011) or even when they go to bed (Lohmann, 2011) today's communicators often turn to digital media as their primary form of communication. I discuss this change in communication behavior in the second paper, where I maintain that it calls into question many of the accepted wisdoms regarding conflict resolution.

The move from face-to-face communication to digital communication impacts the business world as well. In the second quarter of 2014, 6.4% of all retail sales in the U.S. were from e-commerce (U.S. Census Bureau, 2014). One survey shows that seventy-three percent of corporate employees use instant messaging for business communications (The Radicati Group, 2012). This survey reports business users spending two and a half hours of their business day online and averaging 41 minutes of daily instant messaging (The Radicati Group, 2012). We can only imagine how these numbers will increase when today's young population, accustomed to enormous use of digital communication, becomes a major part of the workforce.

Many have noted how aspects of our society adjust because of changes in technologies. Lacznia and Murphy (2006) discuss the critical role of researchers "to identify and evaluate 'side effects' of new technologies in terms of how they must be balanced to promote greater economic fairness and justice." In this dissertation I aim to

answer this call in part, analyzing how society modifies how its members develop trusting relationships and foster cooperation in the face of new communication technologies.

Overview

In three papers I incorporate deontological arguments for ethically-appropriate online behavior with analyses of the consequences of these behaviors. Overall, I show that especially in the digital age, acting ethically has significant effects on trust and cooperation.

I begin with an argument for the role of trust and cooperation as part of the foundation of digital commerce by expanding the reach of the Integrative Social Contract Theory (ISCT) of Donaldson and Dunfee (1994; 1999). I ask whether a digital business community can be a community in the morally relevant ways that Donaldson and Dunfee describe. I conclude that a digital community is a community in the ISCT sense, and therefore the basic framework of ISCT can apply to a digital business world similarly to its application in the offline business world. I then analyze the roles of trust and cooperation in e-commerce, showing how they are important to the digital business community and explaining their moral relevance under a digital form of ISCT. With this understanding I highlight the significant role that trust and cooperation play in this field.

I follow this discussion with two empirical papers whose aim is to understand aspects of trust and cooperation norms in a digital context. The first analyzes how people use different communication media to create trust and cooperation in negotiations. In

contrast to research on the topic from prior decades, I show that many people, particularly Millennials, build trusting and cooperative relationships via digital communication just as well as they do in person. I analyze what particular aspects of digital communication create more trust, and show that people can learn to use digital communication to build trust over time.

In the third paper I continue this process, testing the effects of two particular digital behaviors: norm-violating online incivility and norm-abiding online shouting. I analyze which types of behaviors are considered uncivil in a digital context, particularly in online chats. Then I show that encouraging people to abide by civility norms develops more trusting and cooperative online environments.

Methodological Background

There are two approaches to studying business ethics: Normative methods describe how things should be (e.g. people should not lie) while empirical methods which describe how things are (e.g. most people lie once a day). The comprehensive study of business ethics requires utilization of both empirical and normative perspectives (Donaldson, 1994; Robertson, 1993). In this dissertation I attempt to combine these two methods with a “symbiotic” approach, where the theoretical cores of normative ethics and behavioral research remain separate, but in which the normative goals guide the focus of the empirical studies (Weaver and Trevino, 1994).

In the first paper I develop a normative perspective about the roles of trust and cooperation in a digital community. In the second paper I use these normatively

important issues to direct the empirical discussion; I aim to explain what conditions affect this ethical behavior. In the third paper I use empirical studies to develop a normative consequentialist analysis of incivility. While causal accounts cannot replace moral justification, we can expect to “learn from experiments in living” (Appiah, 2008). In particular, I use the empirical findings of the results of online incivility to help describe why it is normatively wrong; incivility is wrong (in part) because it leads to negative social consequences.

By utilizing this “symbiotic” approach to understanding online negotiations, I attempt to fulfill the research need described by Wicks and Freeman (1998) “To develop research that is focused on serving human purposes – i.e. both morally rich and useful to organizations and the communities in which they operate.” In this dissertation I strive to convey the moral richness involved in discussions of cooperation, trust, and incivility, with the goal of being useful to contemporary businesses, online communities, and individuals who utilize digital communication.

Daniel McAllister (1995) wrote that, “Because economic action is embedded within networks of social relationships, researchers have argued that efficiency within complex systems of coordinated action is only possible when inter-dependent actors work together effectively. Trust between such actors is seen as a determining factor.” This dissertation brings the normative and empirical discussions of trust and effective cooperation in these social relationships to a new reality – the digital society.

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DIGITAL TRUST AND COOPERATION WITH AN INTEGRATIVE DIGITAL SOCIAL CONTRACT

“Despite the long evolution path, the modern e-commerce still has to deal with such challenges as customers’ distrust, doubt and perceived fear. But why do such barriers exist...? The answer is simple: no matter what digital revolution may bring, we are still human beings.”

-Vitaly Gonkov, blogger, 2014

E-Commerce Ethics

Kracher and Corritore (2004) raise the possibility that e-commerce requires a special set of business rules which contend with the interconnectedness, simplicity, speed, virtuality and cost savings of conducting business on the World Wide Web. They conclude that ethical principles from non-digital businesses can apply to e-commerce, with different manifestations. A decade later this issue has ballooned as e-commerce comprises not just online business transactions, but also negotiations, presentations, and business networking conducted digitally. In this paper I discuss trust and cooperation in this expanded e-commerce, involving online markets, SMS messages, social media, and any other digital forum in which business is conducted. I expand the reach of Donaldson and Dunfee’s Integrative Social Contract Theory (ISCT) (1994; 1999) to digital communities and argue that trust and cooperation are part of the foundation of digital

commerce. Because ISCT was designed to fit a dynamic ethical environment including different cultural and moral perspectives, it is a fitting framework for discussing ethics in e-commerce.

To start with, I ask whether a digital business community (such as the virtual communities described in the marketing literature (Hemetsberger, 2001)) can be a community in the morally relevant ways that Donaldson and Dunfee describe. I conclude that a digital community is a community in the ISCT sense, and therefore the basic framework of ISCT can apply to a digital business world similarly to its application in the offline business world. I then analyze the roles of trust and cooperation in e-commerce, showing that they are important to the digital business community and explaining their moral relevance under a digital form of ISCT.

The rise of online businesses came with a host of ethical issues, such as the ethics of spyware, privacy, data mining, data breaches, spam marketing, and the protection of digital property (Laczniak and Murphy, 2006; Palmer and Stoll, 2014; Radin, Calkins & Predmore, 2007; Yang, Chandrees, Lin & Chao, 2009). Although many areas of business include significant risks (such as the risk for a banker of a financial meltdown,) e-commerce entails additional significant risks for parties who do not necessarily have ways of identifying each other and may live under different rules of law as the people with whom they conduct business (Resnick, Zeckhauser, Friedman, & Kuwabara, 2000). This risk highlights the importance of trust and cooperative relationships in e-commerce (Mathwick, 2002; Yang et al., 2009).

Because of the risk of doing business digitally, individuals and firms need to develop an environment of trust and cooperation that allows e-commerce participants to

reap the benefits of digital business (such as speed, cost savings, and interconnectedness, described by Kracher and Corritore, 2004). From a business ethics perspective, this begs the question: What is the digital business person's responsibility in promoting digital trust and cooperation?

There are a number of different approaches to answering this question. Some researchers assume specific ethical values online, such as privacy, truthfulness and property rights, spending their time discussing the effects of these behaviors online (e.g. Yang et al., 2009) or the way people make these ethical decisions (Sarker, Sarker, Chatterjee & Valacich, 2010). Kracher and Corritore (2004) apply "brick-and-mortar" moral principles such as rule utilitarianism and Aristotelian virtue ethics to explain ethics in e-commerce. Others use just war criteria (Schmidt, 2014) Kantian (Bowie and Jamal, 2006) or Hegelian principles (Spinello, 2005) to explain moral responsibilities in the technological global economy.

In this paper I take a different approach to e-commerce ethics; I understand the role of trust and cooperation not only as ethical principles (Baier, 1986; Horsburgh, 1962; Michalos, 1990; Strudler, 2005), but as part of the foundation of digital commerce. To further this understanding, I turn to social contract theories. Following a tradition of developing social contract theories to explain business ethics (Bishop, 2008; Calton and Lad, 1995; Robertson and Ross, 1995; Wempe, 2005), I expand on Donaldson and Dunfee's (1994; 1999) social contract theory to clarify two aspects of digital business ethics: trust and cooperation.

Donaldson and Dunfee's (1994; 1999) ISCT gained significant traction over the past two decades as a way of understanding issues surfacing in international business

ethics (Garriga & Melé, 2004; Mayer & Cava, 1995). In this paper I expand the reach of this theory to include e-commerce and digital communication related to business.

Donaldson and Dunfee (1994; 1999) introduce their discussion of a social contracts approach to business ethics by explaining that the norms of business undergo constant change; contemporary businesses have unique ethical problems and solutions, and the classic philosophical approaches cannot fully answer the ethical questions that arise from business. By 1994 Donaldson and Dunfee felt that a new world had developed – a business world that from an ethical perspective differed from previous business worlds and from other moral parts of our lives (Donaldson & Dunfee, 1994). Just as Donaldson and Dunfee felt that “the ethical game in business is played by different rules...than it did decades ago,” the last two decades since the publication of the ISCT literature has seen its own upheaval in the way business is done, and with that, in the way the “ethical game” is played. Today many of our business interactions – be they negotiations, presentations, networking, or actual transactions – are conducted online. Many of the ethical challenges Donaldson and Dunfee describe as stemming from business being “*almost* entirely the product of human design” (1999:14, emphasis added), make the *entirely* humanly designed internet a moral minefield (Kracher and Corritore, 2004; Laczniak and Murphy, 2006; Lessig, 2001; Maner, 1996; Schmidt, 2004; Spinello, 2005; Tavani, 2001). Since ISCT addresses many of the issues involved in understanding ethics in a dynamic and multicultural environments, it is a useful framework for studying e-commerce ethics. Therefore, I use the ISCT tools as I aim to advance the relatively new field of e-commerce ethics, and will highlight the significant role that trust and cooperation play in this field.

Defining “Trust” and “Cooperation”

Although trust and cooperation are relevant issues for any business environment, they are particularly important to digital commerce because of a unique aspect of this type of business: increased risk (Resnick, Zeckhauser, Friedman & Kuwabara, 2000). First I will discuss this risk; then I will describe the trust necessary to build cooperative digital business environments despite the additional risk. This will provide the basis for the discussion regarding the moral responsibility to promote trust and cooperation in digital business communities.

Risk and Trust

The definition of risk as an uncertainty associated with a significant loss (Yates and Stone, 1992) is well accepted in the literature addressing the relationship between risk and trust (Chiles and McMackin, 1996). Gefen, Rao, and Tractinsky (2003) identify relationships between trust and risk that emerge from the literature:¹

1. Trust reduces the perception of risk.
2. When risk is relevant, trust is relevant; when risk is not relevant, trust is not relevant.
3. When trust is high, risk has less impact on behavior than when trust is low.

¹ The type of risk described by Gefen et al. is not specific to digital commerce, but rather describing potential relationships between risk and trust in general.

4. Trust and risk perceptions are formed independently; if the level of trust surpasses the threshold of perceived risk then the trustor will engage in a risk-taking relationship.²

These relationships are not mutually exclusive. For example, Ryan and Buchholtz (2001) write that trust would not be necessary without risk (2) and also that trust is involved in the determination of perceived risk (1). From the moral philosophy field, Flores and Solomon (1998) define trust and risk together: “Creating trust is taking a risk.” In particular, Flores and Solomon emphasize the importance of what they term authentic trust, in which risks have been well thought out and accepted (similar to explanation 4 above).

Propositions 2 and 4 are most relevant for our discussion of digital trust. Though e-commerce is not unique in its inclusion of risk, there are many uncertainties involving significant losses that specifically arise in digital business (Resnick, Zeckhauser, Friedman & Kuwabara, 2000). Participants cannot always identify each other and often do not have legal or social means to punish people who renege on their commitments. People conducting business online feel a lack of control and greater vulnerability because the parties are faceless and the transactions are paperless (Yang et al., 2009). Additionally, communicating digitally changes the use of nonverbal cues and emotional expressions and limits social and contextual information (Erez, Lisak, Harush, Glikson,

² There is also a fifth relationship discussed by Gefen et al. which we do not discuss here: Trust and risk are independent and independently affect behavior.

Nouri, & Shokef, 2013; Gibson and Gibbs, 2006) which can increase anxiety and insecurity about others' performance (Byron, 2008). Furthermore, people involved in e-commerce often have to deal with unique logistical coordination problems, cultural diversity, different expectations for communication behaviors, and language differences. These factors often cause misunderstandings and divisions between individuals who are supposed to be working together, making it more difficult to form a "cohesive and functioning team" (Erez et al., 2013).

For example, people may not communicate frequently because of difficulties coordinating time differences, which makes it harder for people to work together. Alternatively, someone from a high-honor culture may expect to be addressed with formality, while those from other cultures may address that person by her first name. Someone may call a meeting for 10:00 A.M. in his time zone, not recognizing that it is the middle of the night for other people he works with, which may anger the others in the group. These types of misunderstandings can create distrust among team members (Gibson and Gibbs, 2006). Furthermore, these factors may increase the risk of non-desirable outcomes stemming from team members not understanding each other or not working well together (Erez et al., 2013). These also make it harder to form a collective identity that promotes shared commitments to a common goal (Furst, Reeves, Rosen & Blackburn, 2004), making cooperation more difficult.

Risks are high, and therefore trust is especially relevant in e-commerce (2). Additionally, if we consider trust and risk perceptions to be formed independently (4), then the increased uncertainty means that greater trust is required in order to enable people to engage in digital business. Because of the high risks and importance of trust in

e-commerce, I look to the literature on moral philosophy and organizational behavior to identify common denominators in the varying understandings of trust, which I then apply to digital trust.

What Is Trust?

Business ethicists in the past looked at trust and cooperation as intrinsic parts of business ethics (Flores & Solomon, 1998; Romar, 2004), and as a basis for understanding international business morality (Brenkert, 1998). Researchers in both organizational behavior and philosophy discuss trust and its many facets – the causes and effects of trust, the incidence of trust in different circumstances, and the reasons why society does or does not want trust.³ In many ways, these two disciplines view trust similarly. What follows is not a comprehensive review of all definitions of trust in moral philosophy and organizational behavior; that task is beyond the scope of this paper. However, I intend to identify specific examples of frequently cited literature to show the similarities between these two disciplines' views of trust in order to come to a definition of trust that will be useful for discussing trust in e-commerce.

While moral philosophers and organizational behavior researchers may distance themselves from each other by using different terminology and publishing in different

³ For example: Becker, 1996; Dunn and Schweitzer, 2005; Gauthier, 1986; Halevy and Chou, 2013; Hardin, 1996; Hollis, 1998; Horsburgh 1961; Hosmer, 1995; Jones, 1996; Mayer, Davis, & Schoorman, 1995; Michalos 1990; Pettit, 1995; Rousseau, Sitkin, Burt, and Camerer, 1998; Halevy and Chou, 2013.

journals, both groups seem to be talking about the same basic concept of trust, which for the most part includes:

1. a willingness, intention, or attitude
2. risk or vulnerability (either in trusting itself or in the behavioral manifestation of trust)
3. positive expectation/optimism
4. a relationship between the trustor and the trustee (in some but not all definitions of trust in both sets of literature)

In addition, both disciplines are concerned with many of the same facets of trust:

Why do people trust (Dunn and Schweitzer, 2005; Jones, 1996; Mayer, Davis, et al., 1995; Pettit, 1995)? Why does society need trust (Becker, 1996; Brenkert, 1998; Horsburgh, 1961; Hosmer, 1995; Mayer, Davis, et al., 1995; Michalos, 1990)? What is the role of the trustee in the trustor's trust (Jones, 1996; Mayer, Davis, et al., 1995; Pettit, 1995; Schoorman, Mayer and Davis, 2007; Schweitzer, Hershey, & Bradlow, 2006)? Does trust need to be directed towards a specific trustee (Becker, 1996; Mayer, Davis, et al., 1995; Strudler, 2005)? These questions are similarly important for trust in digital business; understanding what trust is will help us to understand the role of trust for e-commerce.

Organizational Behavior's Trust

In Mayer, Davis, and Schoorman's article "An Integrative Model of Organizational Trust" (1995), the authors define trust in a way that is widely cited in organizational behavior literature:

Trust...is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. (Mayer, Davis, et al., 1995:712)

This definition is widely recognized and frequently cited (Corley and Gioia, 2011). In recent years it has been used as a basis for discussion in many papers (e.g. Bevelander and Page, 2011; Bianchi and Brockner, 2012; Colquitt and Rodell, 2011; Desmet, D Cremer, & van Dijk, 2011; Dunn, Ruedy & Schweitzer, 2012; Gulati, Wohlgezogen & Zhelyazkov, 2012; Kramer and Lewicki, 2010; Lount Jr. And Pettit, 2012; Malhotra and Lumineau, 2011; Palanski, Surinder & Yammarino, 2010; Rupp, Shao, Jones and Liao, 2014; Sonenshein, Herzenstein & Dholakia, 2011) and has thousands of citations.

Rousseau, Sitkin, Burt, and Camerer (1998) discuss a similar notion of trust:

Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another. (Rousseau et al., 1998:395)⁴

This definition has also been widely cited and has been heralded as the "converged upon" definition of trust in organizational behavior research (Li and Tan, 2013; Van Lange, Joireman, Parks & Van Dijk, 2013). (See for example: Desmet, D Cremer & van Dijk, 2011; Dunn, Ruedy & Schweitzer, 2012; Erez, et al, 2013; Kim, Cooper, Dirks & Ferrin,

⁴ They describe their definition of trust as "cross-discipline," although their paper does not explicitly reference the discipline of moral philosophy.

2013; Kramer and Lewicki, 2010; Malhotra and Lumineau, 2011; Mislin, Campagna & Bottom, 2011.)

Moral Philosophy's Trust

Unlike organizational behavior researchers, moral philosophers have not converged on a definition of trust. Here I discuss a number of relevant and commonly discussed aspects of trust discussed in moral philosophy literature. This is intended not as a comprehensive list, but rather to reflect some of the variety of understandings of this topic.

Many philosophers think of trust as an expectation or optimism, much like many organizational behavior researchers (e.g., Becker, 1996; Hardin, 1996; Hollis, 1998; Pettit, 1995).

For example, Philip Pettit (1995) describes a “trusting reliance” in which

one person relies...on another to do something A; this reliance is manifest to the other; and the first person expects the second to be well disposed and to attach a greater utility to doing A for the fact that it represents a way of proving reliable. (Pettit, 1995:206)

Karen Jones (1996) has a similar view of trust as

an attitude of optimism that the goodwill and competence of another will extend to cover the domain of our interaction with her, together with the expectation that the one trusted will be directly and favorably moved by the thought that we are counting on her. (Jones, 1996:4)

Lawrence Becker (1996) describes trust as “a sense of security about other people’s benevolence, conscientiousness, and reciprocity” (Becker, 1996:43).

Authors of recent discussions of trust in moral philosophy, (including Karen Jones' in her later work,) understand trust as a function of its effects. Some view trust not just as an affect or attitude, but as an enabler of attitude (e.g. trust can result in a feeling of betrayal) (Townley and Garfield, 2013). Others see trust as a mechanism for changing how people interpret their situations and justify both taking risks (Jones, 2013) and depending on others (Ruokonen, 2013). These authors and other recent writings suggest that trust is particularly relevant for risky situations, when the outcome (the trustee's action or inaction) is uncertain (Airaksinen, 2013).

Joining Two Worlds

Perhaps the most significant distinction between the organizational behavior literature and philosophical accounts relates to the reason why the trustee is expected to behave favorably towards the trustor. For some moral philosophers, this is a belief in the trustor's benevolence and conscientiousness (Becker, 1996) or her adherence to ethical principles (Baier, 1986; Horsburgh, 1962; Michalos, 1990) and explicit promises (Strudler, 2005). Many behavioral researchers view trust as a willingness to accept vulnerability because of a belief in the trustee's competence and integrity, and the reasonable likelihood that these traits will affect particular behaviors (Kim, Ferrin, Cooper and Dirks, 2004).

Despite some differences on the reasons for trusting, there is considerable overlap between the fields of moral philosophy and organizational behavior. Many authors in both fields recognize that there is some combination of factors that make a person act in a trusting manner, and is the reason why a trustor will trust a trustee. Mayer et al. (1995)

discuss three factors that arise from the organizational behavior literature: ability, benevolence, and integrity. Similar notions appear in the philosophical literature as well: competence (ability), goodwill (benevolence), and the desire to be reliable (integrity) (Becker, 1996; Jones, 1996; Pettit, 1995).

Although organizational behavior researchers and philosophers approach trust with different lenses, many organizational behavior researchers and philosophers who take an unmoralized view of trust are talking about the same things mentioned earlier in this paper:

1. a willingness, intention, or attitude
2. involving an uncertainty associated with significant loss (risk)

These views of trust include many of the same underlying values:

3. positive expectations about another's behavior, and
4. a relationship between the trustor and the trustee

Many researchers from the fields of both moral philosophy and organizational behavior are interested in trust that involves a **willingness to take a risk based on an expectation that the trustor will act in the trustee's interests**. This is the definition I rely on for the arguments in this paper. My intention with this definition is not to answer the question "what is trust" on a philosophical level, but to incorporate many of the critical aspects of trust that arise in these fields into a working understanding of trust for use in the rest of this paper. This type of trust takes place in situations of uncertainty associated with loss which is particularly relevant to the high-risk e-commerce environment that I discuss in this paper.

Trust and Cooperation

With this definition we can think of trust as an attitude (willingness) and not a behavior. One aspect of this kind of trust is that it *enables* cooperative behavior (Gambetta, 1988). In Hosmer's discussion of organizational theory and moral philosophy, he presents this idea as a general consensus in the literature regarding cooperation:

Trust is generally associated with willing, not forced, cooperation and with the benefits resulting from that cooperation.... The objective of trust is usually expressed as an attempt to increase or facilitate cooperation and/or the potential for joint benefits. (Hosmer 1995:390)

Trust often leads to cooperative behavior, but isn't a necessary condition for cooperation because there can be cooperation without risk, or with minimal risk (Mayer, Davis, et al., 1995:712), which therefore would not require trust (Rousseau et al., 1998:399). However, cooperation that involves risk arising from cooperation failures, such as cooperation needed for many online business transactions (Son, Tu & Benbasat, 2006), does require trust. If people do not trust that the other parties will also work towards the benefit of others involved in the transaction, they will not risk cooperating.

Particularly in scenarios where cooperation is a big risk, such as financial or time contributions to a digital business deal, trust plays a significant role (Gulati, Wohlgezogen & Zhelyazkov, 2012). If an individual is concerned that the other parties will not contribute towards the group benefit, she will not cooperate in the effort. However if she trusts that the other parties will also contribute the finances and time they

have pledged, then she will be more likely to cooperate as well. Therefore in this paper I discuss **cooperation in risky circumstances as a resulting behavior of the attitude of trust** (Gulati and Sytch, 2008; Gulati et al., 2012; Zaheer, McEvily & Perrone, 1998).

Why Trust and Cooperate

There are many approaches to thinking about the reasons people *should* (from a moral perspective) trust and be trustworthy and cooperative. Some philosophers describe the duty to trust and cooperate as part of a Kantian duty to act with beneficence and to protect the rights and interests of others (Hargreaves-Heap and Varoufakis, 2004; Michalos, 1990). Others describe a moral requirement to cooperate which stems from an explicit relationship between the parties and from the trustor's holding the autonomy of the trustee (Strudler, 2005). Others view trustworthiness as a virtue, either in the Aristotelian sense of defining a good character (Horsburgh 1960; Solomon 1992) or as an attribute with intrinsic value, like courage (Brenkert 1998). In the rest of this paper I will explore an alternative explanation for why – morally – people should build a trusting culture, particularly online. This explanation relies on an application of Donaldson and Dunfee's ISCT to digital communities.

ISCT in a Digital World

I turn to ISCT to provide a framework for analyzing moral responsibility to trust and cooperate in an e-commerce environment. I start by describing some of the basic concepts of ISCT. The premise of this theory is that the global business community is made up of smaller communities. I show that digital communities qualify as communities and that ISCT applies to these structures. I then use the argument of ISCT to explain the importance of trust and cooperation in these digital communities.

Contracting ISCT

Donaldson and Dunfee's ISCT is a hypothetical social contract – an agreement about moral responsibilities in the business world – to which hypothetical contractors would agree. Like Rawls (1971), Donaldson and Dunfee put their hypothetical contractors behind a veil of ignorance, obscuring who they are: where they fall socioeconomically, and what their personal wealth is. Unlike Rawls (but similar to Harsanyi (1977,)) Donaldson and Dunfee assume that their contractors do know their own economic and political preferences and the basic values to which they subscribe.

Donaldson and Dunfee's contractors use their economic and political preferences, combined with their understanding of morality to determine a set of core assumptions. Because of this approach, Donaldson and Dunfee's contractors end up with a social contract based largely on fundamental moral norms which they call "hypernorms." Specifically, Donaldson and Dunfee divide the obligations that stem from this social

contract into two categories: hypernorms and community-specific norms. Hypernorms are consistent with precepts of major philosophies and with universal human values. Widespread consensus that a norm is universal indicates its potential qualification as a hypernorm, as does support by international and regional organizations, such as the OECD. Some examples of hypernorms are human rights (such as rights to life, liberty, security, and privacy) and complying with contracts. Donaldson and Dunfee do not identify a particular source of hypernorms, but state: “Whether hypernorms are based in reason or in nature, they should be recognizable in a convergence of intellectual thought and should be proclaimed global norms” (1999:74).

Community-specific norms (such as addressing seniors with terms of respect) are consistent with the behavior and beliefs of most individuals in the group and reflect chosen values and preferences. Community-specific norms include addressing seniors with terms of respect, or “going Dutch” on a first date. These norms are authentic norms when they are generated in microsocial contracts, meaning that individuals in the community willingly consent to the norms. Community-specific norms are obligatory only if they are “legitimate,” meaning that they do not conflict with hypernorms.

The implication of ISCT is that hypernorms create moral obligations for everyone, while community-specific norms only create obligations for the communities that adopt them (as long as they are consistent with hypernorms).

Just as Donaldson and Dunfee’s hypothetical contractors rely on their understanding of moral principles as well as their appreciation for local differences, I assume that online hypothetical contractors under the same conditions would rely on the same principles and interests to contract something like ISCT. There is no reason to

assume that people who interact online have a different understanding of hypernorms than the offline hypothetical contractor. The only distinction to draw between the Integrative Social Contract and the Integrative Digital Contract is in defining a community for the purposes of determining community norms. In a digital world “community” can include people who never meet, do not work for the same company, and are not geographically close, but who interact in a significant communal way, as I will discuss below.

Expanding the Moral Community

Donaldson and Dunfee’s ISCT is useful to businesses because many global businesses function in different parts of the world and conduct business with people who have diverse moral and cultural viewpoints. For the same reason, ISCT applies to diverse digital life. Leaving aside virtual worlds and bots, and focusing solely on business-related digital use, we can appreciate the range of backgrounds and attitudes that interact online, as an MBA-trained venture capitalist can buy a product from a high school dropout. But more relevant to our discussion is the diversity in ethical beliefs and understanding of moral responsibility that is found on the internet (Erez et al., 2013; Kracher and Corritore, 2004; Vardi, 2001). E-commerce opens up new business environments, cultures, and behaviors for ethical examination (Kracher and Corritore, 2004); individuals collaborating in e-commerce are working together, but they may have very different understandings of their ethical and moral responsibilities to that work, possibly stemming from their diversity in culture and education.

Donaldson and Dunfee's solution for the moral dilemmas of the ethically diverse offline business world is a social contracts approach that takes into account both international moral sensibility and local moral norms. Like other social contracts, ISCT derives its authority from the assumption that people acting rationally would hypothetically consent to the terms of a contract affecting the community of which they are a member.

The relevant question for this paper is whether people who conduct business-related communication and activities online are considered a community. Research on virtual behavior indicates that people exhibit social behavior online similar to offline communities. For example, Erez et al. (2013) discuss global identity – a “sense of belonging” to global multicultural teams – which increases when people work together online. Global identity encourages individuals to view others (even those who are not geographically nearby) as belonging to their in-group (Erez et al., 2013); in other words, when people work together on teams they form communities. These communities are similar to the structures described by Donaldson and Dunfee.

Donaldson and Dunfee discuss different types of groups that qualify as communities, from corporations to informal community structures:

We previously defined a community as “a self-defined, self-circumscribed group of people who interact in the context of shared tasks, values, or goals and who are capable of establishing norms of ethical behavior for themselves” (Donaldson & Dunfee, 1994:273). This open-ended definition is intended to allow for great variety in the way in which people

form relationships capable of generating authentic ethical norms.

(Donaldson & Dunfee, 1999:98)

Using this definition, we can think of many online groups that can be considered communities. Online support groups provide participants with a sense of intimacy and emotional bonding (Stephen, 2014). For online retailer Amazon, buyers and reviewers interact in the review process, and have established norms such as being specific and sincere (Dobrescu, Luca & Motta, 2013). On the social networking and news site Reddit, community members submit content in particular subject areas (called threads). Reddit's "startup" thread has a stated ethic to give unbiased advice (Reddit, b). There are countless other examples of online communities that are not only capable of establishing norms, but have actually defined norms of ethical behavior for themselves.

Many of these online groups (such as Amazon, Reddit, and countless others,) require people to sign-up for membership before posting, thus creating a distinct group. Others don't require membership, but create strong group bonds through mutual participation which define their community.

In addition, there are many informal groups that have informally defined norms of ethical behavior. Donaldson and Dunfee describe these types of groups as communities as well. They explain that while corporations are the most easily identifiable community in ISCT, authentic norms can be developed by highly informal, even transient communities. People develop norms of mutual commitment, with a "common fate" identity emerging in their small, transient community (Donaldson & Dunfee, 1999:99). Under these terms, even people engaged in an email exchange about a business in which they are both invested could be considered a community. The members of these

communities, like the members of Donaldson and Dunfee's global business communities, could each hypothetically consent to the terms of a social contract similar to ISCT.

Trust and Cooperation in ISCT

Necessary Social Efficiency

Since online communities fit Donaldson and Dunfee's description of community and the general framework of ISCT applies to the Integrative Digital Contract, I can apply some of the specific hypernorms from the ISCT literature to online contexts.

Donaldson and Dunfee describe three types of hypernorms that create moral obligations for everyone: procedural (rights of exit and voice), structural (necessary for political and social organization), and substantive (fundamental concepts of right and good).

One example of a structural hypernorm they develop is necessary social efficiency. Donaldson and Dunfee's argument for a hypernorm of efficiency is essentially that if a good possesses "intrinsic worth for society," then it is a good that society must pursue. This pursuit of necessary goods is a moral good. More efficient pursuit of necessary goods – enabling the pursuit of more necessary goods for more people – itself has intrinsic worth for society and is a moral good. Thus Donaldson and Dunfee show the importance of attaining efficiency for fundamental values, with the caveat that the efficient pursuit of one good does not violate a different necessary good.

The category of necessary goods includes things that all rational people (and "any society anywhere") want more of (Donaldson & Dunfee, 1999:119). Relying on Rawls (1993) and Sen (1992), Donaldson and Dunfee outline two necessary goods that they consider relevant to the discussion of efficiency in business ethics: fairness/justice and aggregative economic welfare. This approach leads the authors to the belief that

efficiency in the pursuit of either aggregative economic welfare or fairness is an implied (“necessary”) moral good for members of society.

Trust and Cooperation as Efficient Strategies

Donaldson and Dunfee point out the need for collective solutions, and in particular for adequate systems and frameworks that support efficiency. The “efficiency strategies” that a particular society undertakes to achieve fairness and aggregate economic welfare may consist of both formal rules and informal norms and habits. Many of these strategies become microsocial norms, meaning that they contain moral obligations for the societies that adopt them.

The more obvious role for digital trust and cooperation in improving necessary social goods is in supporting aggregate economic welfare. Cooperation is a foundation of the strategies promoting greater efficiency in aggregate economic welfare. Adam Smith (1776) raises this notion in his iconic pin factory example. Ten individuals contribute to the production of pins, each person performing a different task in the manufacturing process. It is only because of their cooperation that they are able to create any pins at all. The same is true, Smith writes, of most of our goods which require “the assistance and cooperation of many thousands” (Smith 1776, book 1, chapter 1).

Contemporary thinkers support the idea that cooperation is necessary for social efficiency. Donaldson and Dunfee cite Jones (1994), who writes that “without cooperation, production of any meaningful magnitude is not feasible.” Aggregate economic welfare benefits from a behavioral norm of cooperation. With this norm,

communities can provide more collective goods and experience higher group welfare (Hollander, 1990).

In social dilemmas, cooperation can often prevent individual rationality from leading to collective irrationality (Kollock, 1998). Additionally, having generalized norms of cooperation encourages participation in social exchanges, and motivates people to contribute to knowledge exchange, making cooperative norms a “foundation of the creation of intellectual capital” (Lesser 2000; Putnam, 1993).

Putnam (1995) illustrates this view from a sociological perspective. He describes social capital as aspects of social life that enable communities to act together more effectively in pursuing collective goals. Examples of these “social connections” in Putnam’s work include norms of cooperation and trust. Trust promotes cooperation, which in turn promotes greater social capital. Cohen and Prusak (2001) outline this relationship:

Trust is the one essential lubricant to any and all social activities.... In the event of conflict, trust is essential, as failed attempts at negotiation between countries and ethnic or religious groups sometimes painfully demonstrate. Trust is basic to human society.... The relationships, communities, cooperation, and mutual commitment that characterize social capital could not exist without a reasonable level of trust.... We see trust as a necessary condition of social capital, and its natural starting point. (Cohen and Prusak, 2001:29)

Donaldson and Dunfee also discuss the benefits of trust in increasing efficiency in aggregate economic welfare:

Ethical principles, including trust, trustworthiness, and cooperation, can result in significant competitive advantages over time for corporations (Jones, 1995). Trust (Hosmer, 1995) is an especially potent engine of efficiency inside corporations insofar as it obviates the need for expensive compliance structures (Jones, 1995). (Donaldson & Dunfee, 1999:128)

Corporations are not the only beneficiaries of norms of cooperation and trust. Cohen and Prusak's conception of social capital that stems from trust and cooperation is linked with economic growth (Whiteley, 2000) and can increase the advantages of social investments in physical and human capital (Cerreta, 2003). Researchers also associate this type of social capital with lower transaction costs and faster innovation (Putnam, 1993).

Trust and cooperation in online communities can build social capital and contribute to greater efficiency in aggregate economic welfare. Fukuyama (1995) discusses "spontaneous sociability" which stems from high levels of intra-communal trust. This sociability explains people's willingness to participate in organizations outside of their families (Donaldson & Dunfee, 1999:129) and can also go a long way in explaining why people feel obligations towards online groups and communities (explaining, for example, why people write and trust online product reviews (Rhodes, 2009)).

Another example of strong cooperative norms increasing aggregate economic welfare is open-source software. In open-source software the source code is available for free, which allows users to change and distribute it. The software is developed collaboratively, with each user improving it for the good of the public. The norm among

the users of open-source software is that an individual will fix a mistake or add useful content even if the personal payoff does not justify the cost in time and energy. This is partly because supporters know that others will do the same and overall they will benefit from useful software. This type of collaboration is only possible where there are strong norms of digital cooperation.

The same is true for the online encyclopedia Wikipedia, which is written collaboratively “by the people who use it” (Wikipedia: Introduction). People are constantly changing Wikipedia, writing new entries and editing written ones. Wikipedia’s site says that it is “a special type of website designed to make collaboration easy” (ibid.). As with open-source software, people contribute even if the individual benefit they receive from making these edits does not compensate them personally for their costs. This collaboration exists because people feel strong norms of digital cooperation.

We can also consider examples of digital cooperation encouraging fairness and justice in e-commerce. Online ratings increase the amount of quality information available about products, buyers, and sellers (Dobrescu, Luca & Motta, 2013), contributing to fairness in e-commerce. These ratings also increase accountability, encouraging online sellers to accurately describe their products and buyers to pay on time and in full, lest they suffer negative ratings. This mechanism often acts in place of the courts to ensure justice for online purchasers and sellers. Although users are not required to rate the products they buy or their interactions with the buyers or sellers, many often do, contributing to the cooperative effort of increasing online justice and fairness.

Whether they are dealing with handling social dilemmas, creating “spontaneous sociability,” minimizing transaction costs, or increasing accountability, norms of cooperation and trust can help online communities grow their aggregate economic welfare and promote fairness. Therefore, under the rubric of ISCT, microsocial norms of trust and cooperation can be legitimate norms, supporting the hypernorm of necessary social efficiency.

Why People Trust and Cooperate

In addition to the sociologists and behavioral scientists whose work supports the argument that trust and cooperation are part of the hypernorm of necessary social efficiency, many philosophers also describe trust and cooperation as emerging in society as a way to improve social life; in essence, they discuss the role of trust and cooperation in efficiently providing necessary goods. Trust and cooperation are necessary because they direct society towards the common good (Michalos, 1990) by encouraging pro-social behavior (Ims and Jakobsen, 2006) and allowing people to efficiently achieve social objectives (Horsburgh, 1961).

Two cycles of trust and cooperation explain how society develops these norms. People become trustworthy so that other people will trust them (Gauthier, 1986). When an individual knows that other people want to be trusted, and that they therefore will act with trustworthiness, it makes rational sense for the individual to trust them (Pettit, 1995). This in turn encourages people to be more trustworthy so they will continue to be trusted. In this way, people become more trustworthy from being trusted. This idea appears in the Babylonian Talmud as well, which describes how the benefit a person receives from

being publicly trusted (as a guarantor) creates his obligation to be trustworthy (Babylonian Talmud, *Bava Batra* 176b).

The effectiveness of the first cycle of trust in promoting social welfare relies on a second cycle: trust and cooperation as communal norms. Without norms of trust and cooperation, people won't trust and cooperate, and then they will not develop norms of trust and cooperation. The opposite circle is true as well. If people trust and cooperate, others will feel that they too should trust and cooperate (Hollis, 1998; Pettit, 1995). This encourages people to trust and cooperate more, in part because they think it will make others act more trustworthy and cooperative (Jones, 1996). This cycle leads to norms of trust and cooperation. Knowing that our activities are governed by trust norms, that we will quickly be able to decipher those norms, and that other people involved in our activities will act in accordance with those norms (Becker, 1996), people will follow those norms and be trusting, trustworthy, and cooperative. This enhances the individual's sense of security (Becker, 1996) and encourages greater social welfare (Horsburgh, 1961; Ims and Jakobsen, 2006; Michalos 1990).

Figure 1: Cycle of Trust Norms

Using this cycle we also see that trust norms help promote fairness and justice, necessary social goods under ISCT. People in this cycle learn to act in a trustworthy manner and in return expect to be beneficiaries of trustworthy behavior. When trust norms are strong there is reciprocity in the cycle creating a system of fairness and justice.

Understanding the progression of norms of trust and cooperation in efficient society is useful not only to explain how we got to where we are – a state of psychological prominence for trust and cooperation (Halevy and Chou, 2013) – but also to explain the importance of these norms in efficiently providing for society's necessary goods, namely aggregate economic welfare, fairness and justice. In this way, trust and cooperation norms are instantiations of the efficiency hypernorm Donaldson and Dunfee describe and therefore imply moral obligations to abide by these norms.

Digital Trust and Cooperation-Building Norms

In section 2 I demonstrated that ISCT provides a foundation for understanding moral behavior in digital communities. In section 3 I illustrated how norms of trust and cooperation are an instantiation of the efficiency hypernorm, and therefore are morally prescribed by ISCT. It follows that digital communities are bound by the efficiency hypernorm, and that individuals in digital communities are morally obligated to promote trust and cooperation. Below I explain how the social efficiency hypernorm allows moral free space for microsocial norms and that many digital communities have already developed digital microsocial norms that support trust and cooperation.

Moral Free Space

Donaldson and Dunfee explain moral free space as “the area bounded by hypernorms in which communities develop ethical norms representing a collective viewpoint concerning right behavior” (Donaldson & Dunfee, 1999:83). These ethical norms can be expressed as formal rules or as unwritten, implicit agreements among groups of people. By creating room for microsocial ethical norms, moral free space:

- (1) enables organizations to deal with the opaqueness that results from bounded moral rationality, (2) allows communities to reflect (within important limits such as hypernorms) their own chosen values and preferences, (3) provides for variances reflecting a world of enormous

diversity, and (4) allows communities to develop ethical norms enabling efficient achievement of core goals. (Donaldson & Dunfee, 1999:86)

Above I illustrated that online norms of trust and cooperation are supported by the hypernorm of necessary social efficiency, as well as other moral considerations. This support allows moral free space in which digital communities can develop ethical norms that are bounded by hypernorms. The specific practices that support trust and cooperation online fall into the category of microsocial norms created by this moral free space.

Digital Microsocial Norms

Most of the online communities that facilitate internet communication for business-related communication and activities publish formal norms. Many of these rules exist to support trust-building and cooperation within the community. For example, buyers and sellers on eBay (a consumer-to-consumer shopping website) are told not to misrepresent their identity or falsely report on another eBay member. These rules are formally part of eBay's Code of Business Conduct and Ethics, which states that "we believe that an honest, open environment can bring out the best in people" (eBay).

Other websites that view themselves as online communities also specify formal norms which help maintain trust and cooperation among group members. Reddiquette (an etiquette list for Reddit, a social networking and news site) requests of people: "Please don't conduct personal attacks on other commenters" or offer to exchange gifts

for votes⁵ on the site (Reddit, a). Craigslist (a classified advertisement website) also prohibits misleading or deceptive content, as well as offensive or obscene postings (Craigslist).

Informal digital norms also exist for these types of communities, though their informal nature makes them difficult to pinpoint. However some anecdotal examples come to mind: Reddit users developed a norm of authentically *upvoting* or *downvoting* items based on their interest level. The authenticity of this voting system is entirely voluntary, but the results show a truthful reflection of what users find interesting. Similarly Craig Newmark, the founder of Craigslist, pointed out that his site works not because of formal rules but because “there is a culture of trust on the site” created through informal rules (Pennace, 2005). There is also experimental research showing the development of online norms, particularly in virtual teams (e.g. Glikson and Erez, 2013).

Donaldson and Dunfee’s understanding of the importance of moral free space illuminates the formal and informal norms created by online communities. Moral free space (1) enables online groups to appreciate specific ramifications of bounded moral rationality, (2) allows online communities to determine what values are most important for their needs, (3) provides for variances reflecting an online world with enormous diversity, and (4) allows online communities to develop ethical norms which help them achieve their core goals.

⁵ On Reddit’s social networking site users post submissions and other users vote those submissions “up” or “down” which then affects the submission’s placement on Reddit’s page.

Authentic Online Norms

According to Donaldson and Dunfee's criteria, an ethical norm is authentic when "a substantial majority of the membership holds the attitude that a particular behavior is right (wrong) and a substantial majority act consistently with that attitude" (Donaldson & Dunfee, 1999:102). While we do not have data about whether microsocial online norms encouraging trust and cooperation are believed to be right according to a substantial majority of a particular community, we do have anecdotal evidence that people in the communities mentioned above tend to stick to the norms, and thus create "a culture of trust."

We also have empirical evidence of certain trust-building behaviors in specific circumstances. When participants in an online study were asked to chat with each other as part of an exercise, only 2 of the 102 conversations included any form of cursing, which can be considered a signal of uncooperative online behavior (as discussed in "Why the F* Don't They Trust" in this dissertation). In contrast, almost all of the participants (93 percent) employed trust-building norms such as opening the conversation politely. While this doesn't provide evidence about the authenticity of norms in specific online communities, it does show that online users can be inclined to follow trust and cooperation-building norms.

In order for an authentic norm to be considered a legitimate norm in Donaldson and Dunfee's framework it must not conflict with hypernorms. I already discussed how norms promoting trust and cooperation are an instantiation of the efficiency hypernorm. I've also shown that other potential sources of hypernorms (such as virtue ethics or Kantian duties) allow moral free space for the development of trust-building and

cooperative microsocial online norms. In addition, online trust and cooperation and the norms that support them do not necessarily conflict with what Donaldson and Dunfee refer to as “collective agreement” hypernorms – agreements reached by people from different communities about basic rights – such as the United Nations’ Universal Declaration of Human Rights (Donaldson & Dunfee, 1999:69). There are times when microsocial norms of trust and cooperation can be used for illegitimate purposes, such as the Silk Road’s use of strong trusting online relationships to arrange for illegal drug sales and other nefarious ends (Ball, 2013). In these circumstances, trusting norms would not be legitimate moral norms. Despite this, for many online business communities norms of trust and cooperation can be authentic, legitimate norms used to build efficiency and to work towards legitimate moral ends.

Conclusion

Kracher and Corritore (2004) argue that the burgeoning field of digital business ethics needs research on trust as a value in e-commerce. Answering their call, I asked: What is the digital business person’s responsibility to promote digital trust and cooperation? I answer that the individual is morally responsible to follow authentic norms of trust and cooperation developed in digital communities. I approached this conclusion by using ISCT as a basis for understanding moral responsibility in digital business activities. As part of this discussion I expanded the reach of Donaldson and Dunfee’s concept of community to include digital communities of people who conduct business-related communication and activities together. I then used the ISCT framework to show that trust and cooperation are an instantiation of the hypernorm of necessary social

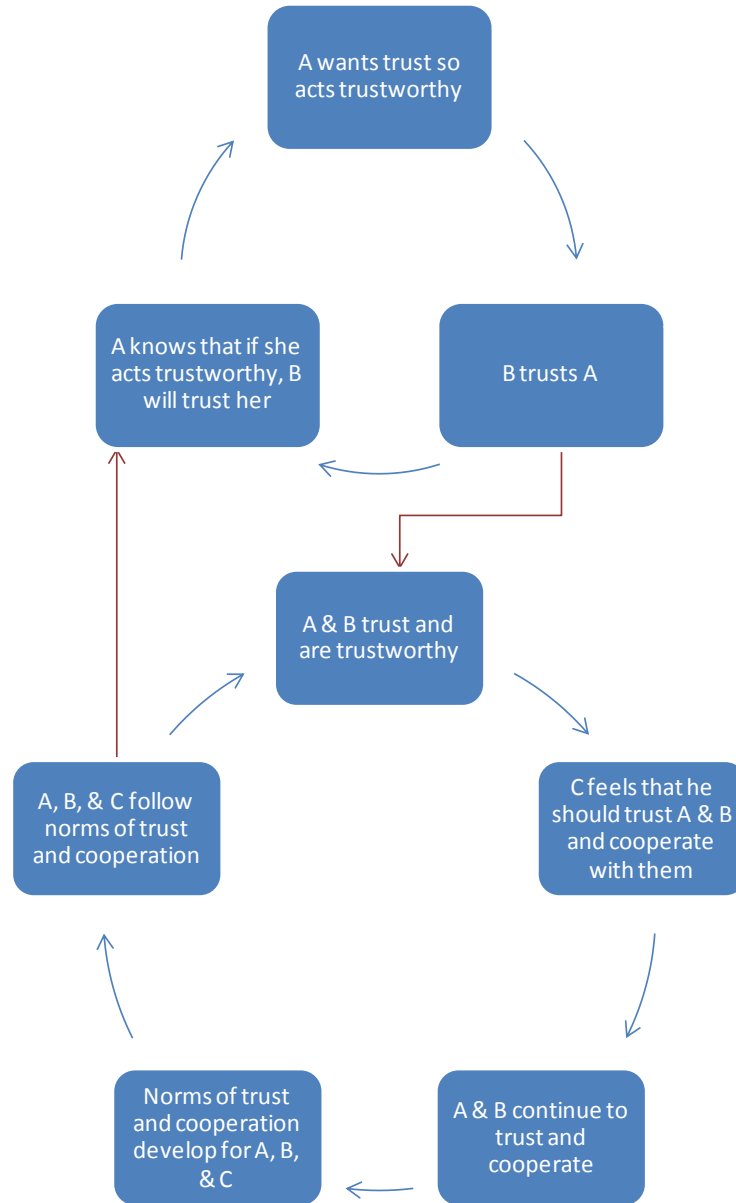
efficiency, and that authentic microsocial norms developed for the ends of trust and cooperation carry moral responsibility. I then gave a glimpse of the importance of microsocial norms of trust and cooperation for digital business.

With this paper I aim to contribute to the discussion of digital business ethics by analyzing what makes the digital world unique from many other business environments – increased risk and diversity – and showing that these factors do not detract from individuals’ ethical responsibilities online. Instead, individuals participating in digital commerce have a responsibility to follow trust and cooperation norms developed by digital communities. I do not discuss whether the digital business person has an obligation to aid in formation of these norms, and I see this as an area for future research.

To fully understand and appreciate the individuals’ responsibilities in this matter, and to uncover the importance and nature of digital microsocial norms, we need empirical research on the causes and effects of digital trust and cooperation and on the microsocial norms developed by digital communities. Empirical research can elucidate what these norms are, how and why they affect trust and cooperation, and how to encourage the development of pro-social digital norms.

The next two papers in this dissertation begin to uncover empirical findings in this area by analyzing factors which create greater digital trust and cooperation. In these papers I look at how particular circumstances such as age and experience with digital communication affect behavior with digital media and how certain controllable digital behaviors such as style and length of digital texts affect trust and cooperation. I also discuss one particular online microsocial norm – online civility – and its affect on trust and cooperation in digital communities. In the following papers I discuss some of the

many examples of how the way people communicate digitally affects their ability to create trust and cooperation; future research can continue this endeavor, in an attempt to understand the digital environment and to create more trusting and cooperative digital communities.

Figure***Figure 1: Cycle of Trust Norms***

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NEGOTIATING WITH THE MILLENNIAL GENERATION

“Every great movement in the history of Western civilization from the Carolingian Age to the nineteenth century has been an international movement which owed its existence and its development to the cooperation of many different peoples.”

-Christopher Dawson, Historian 1889–1970

“Dude, I Think I Forgot How to Talk.”

-Danielle Williams, Blogger, b. 1991

Theoretical Framework

Cooperation and Trust

Background. Cooperation can be viewed through various moral lenses.

Corporations may cooperate to raise prices; lobbyists and politicians can cooperate to impair democratic values. Despite these unethical uses of cooperation, society benefits from a behavioral norm of cooperation. With this norm, communities can provide more collective goods and experience higher group welfare (Hollander, 1990). In social dilemmas, cooperation can often prevent individual rationality from leading to collective irrationality (Kollock, 1998). Additionally, having generalized norms of cooperation encourages participation in social exchanges, and motivates people to contribute to

knowledge exchange, making cooperative norms a “foundation of the creation of intellectual capital,” (Lesser 2000, Putnam, 1993).

Trust is a critical factor in cooperative relationships (Yamagishi and Yamagishi, 1994). In order to have successful cooperation, parties need a mutually rewarding exchange relationship (Morgan and Hunt, 1994). Many cooperative situations, (such as modeled by the prisoner’s dilemma,) involve an exchange where each party will be harmed by investing unless the other parties also invest. To be willing to commit to this relationship, each party must believe that the others will also commit to the exchange. This involves a belief that others will not act with intentional acts of deceit. The willingness to act on this belief is trust. In this paper we discuss this form of trust, described by Rousseau, Sitkin, Burt, & Camerer (1998) as the “willingness to accept vulnerability based upon positive expectations about another’s behavior.”

In order to have a cooperative community, individuals must trust each other. They must also display trustworthy behavior – actions which do not intentionally harm a vulnerable trustee (Schweitzer, Hershey & Bradlow (2006).

Communal norms of trust and cooperation. Societal norms of trust are necessary for promoting society’s aims. Putnam (1995) describes social capital as aspects of social life that facilitate communities to act together more effectively in pursuing collective goals. Examples of these “social connections” in Putnam’s work include norms of cooperation and trust. Trust promotes cooperation, which in turn promotes greater social capital. Cohen and Prusak (2001) outline this relationship:

Trust is the one essential lubricant to any and all social activities... In the event of conflict, trust is essential, as failed attempts at negotiation between countries and ethnic or religious groups sometimes painfully demonstrate. Trust is basic to human society... The relationships, communities, cooperation, and mutual commitment that characterize social capital could not exist without a reasonable level of trust... We see trust as a necessary condition of social capital, and its natural starting point. (Page 29)

The social capital Cohen and Prusak discuss is linked with economic growth (Whiteley, 2000) and can increase the advantages of investments in physical and human capital (Cerreta, 2003). Researchers also associate social capital with lower transaction costs and faster innovation (Putnam, 1993).

Social capital generated through trust and cooperation is particularly important to the online community. Companies need trusting relationships with suppliers, distributors, customers, and complementary businesses (Ozer, 2005). People on all sides of online dealings need to trust that the other parties are truthful and sincere in order to engage in safe, meaningful interactions (Herring, 2002). In order to develop successful online communities and marketplaces, everyone from computer programmers to retailers and customers needs to cooperate in mutually rewarding exchange relationships; in other words, they need to provide for others and expect that others will compensate and provide for them.

For example, open-source software has benefited from strong cooperative norms. In open-source software the source code is available for free which allows users to change and distribute it. The software is developed collaboratively, with each user improving it for the good of the public. The norm among the users of open-source software is that an individual will fix a mistake or add useful content even if the personal

payoff does not justify the cost in time and energy. This is because supporters know that others will do the same and overall they will benefit from useful software. This type of collaboration is only possible where there are strong norms of cooperation.

Communication and Cooperation

Literature review. Many researchers have shown the benefits of communication in negotiations. Valley, Moag and Bazerman (1998) write that, “Communication impels negotiators to incorporate elements of honest information exchange, cooperation and trust into their negotiation strategies, thus allowing mutually beneficial agreements.” Daniel Balliet (2010) uses a meta-analytic review to show that in social dilemmas there is a large positive effect of communication on cooperation. This research demonstrates that communication encourages adoption of joint cooperative behavior. This paper develops this thesis further by exploring how a change in one aspect of communication – the medium – can change the adoption of cooperative behavior. In particular, we show that despite prior research indicating a preference for face-to-face communication, people, (particularly Millennials,) can build trusting and cooperative relationships through digital communication.

The effects of online communication have been studied over the last two decades. Most of these studies show that online communication is less useful in building relationships than in-person communication and that electronic media may impede the success of people working together (Erez et al., 2013). These researchers fall into two categories. Some identify a gap between the type and style of information conveyed digitally and the way people communicate in person (Trevino, Lengel & Daft, 1987;

Naquin & Paulson, 2003) which prohibits effective exchange of information. Others focus on particular mechanisms which affect the interpersonal relationship between the negotiating parties, suggesting that participants in online negotiations have lower levels of trust in their counterparts (Naquin & Paulson, 2003) and that this mistrust is likely to result in a breakdown of negotiations (Moore, Kurtzberg, Thompson & Morris, 1999).

The first category of researchers question negotiators' capabilities to effectively share information through digital media. Some negotiations research suggests that people are less able to convey certain types of information online than they are in person (Naquin & Paulson, 2003). However research from other disciplines indicates that online discussions may be more useful for group productivity (Gallupe, Bastianutti & Cooper, 1991). Additionally, recent education research (as well as anecdotal evidence of the prevalence of digital texting and emailing,) shows that people in the Millennial Generation often use these media as preferred forms of communication (Godwin-Jones 2005), suggesting that there is nothing inherent in online communication itself which would slow the flow of information and inhibit cooperation.

The second category is researchers who propose that online negotiations suffer from weaker trust mechanisms and lower rapport than in-person negotiations (Moore et al. 1999; Morris, Nadler, Kurtzberg and Thompson, 2002). Rapport, a "state of mutual positivity and interest" is connected to cooperation and information-sharing in negotiations (Nadler, 2003) and is more difficult to develop through digital communication (Moore et al. 1999; Morris et al. 2002). This approach suggests that the most significant barrier to successful collaborative negotiations online (versus in-person) is the ability to develop a relationship of mutual understanding and goals. If such a

relationship exists prior to the negotiation, then online and in-person negotiations should not be significantly different from one another. Additionally these theories suggest that people who are accustomed to developing thoughtful relationships online will be able to negotiate collaboratively.

Researchers in this category also suggest that communication media contribute to different levels of truth-telling and trust and are therefore critical determinants in the efficiency and distribution of negotiations outcomes (Valley, Moag & Bazerman, 1998). However digital communication is more easily recorded and referenced than face-to-face communication and may therefore elicit more truthfulness and give online remarks more reliability, in turn making these conversations more trustworthy. Indeed more recent research shows that communication via email is more likely to elicit truth-telling than face-to-face interactions and that instant messaging has the same truth-power as face-to-face communication (Hancock, Thom-Santelli & Ritchie, 2004).

One theory which crosses these two categories is that e-mail inhibits the process of exchanging personal information which is necessary for relationship-building (Morris, Nadler, Kurtzberg and Thompson, 2002). Researchers of online dating have been particularly interested in this issue. Gibbs, Ellison, and Lai (2011) noted that online daters deal with problems of wariness of disclosure of personal information, and trustworthiness of others' information. If this information is not shared in a trusting manner, it can be an obstacle to relationship development. Gibbs notes:

As online technologies, and the communicative affordances they offer, become central in many individuals' social practices and daily experiences, privacy concerns – what to disclose, to whom, and how to ensure that others are disclosing honesty in return – are increasingly salient... This is especially true in contexts such as online dating, where

individuals often initiate relationships with people they do not know in offline contexts... The lack of shared physical context and nonverbal cues can create greater uncertainty about others and complicate the process of forming relationships” (Gibbs, Ellison and Lai, 2011).

These same researchers, while noting potential difficulties in developing trusting online relationships, also point out that online daters develop behaviors which reduce uncertainty and verify others’ credibility (Gibbs et al, 2011). It is these mechanisms which allow dating sites to promote relationships.

While a relationship in a business negotiation is not the same as a dating relationship, similar principles apply. When people negotiate using digital messages, they lack the physical context and nonverbal cues often used to help verify truthfulness, encourage them to share personal information, and build relationships. However, people communicating digitally replace those cues with new ones gleaned from the language, style, and content of the messages.

Millennial communication. Communication, especially among people born between 1982 and 2005, known as the Millennial Generation (Howe and Strauss, 2007), is focused heavily on text messages, emails, digital social media, and online chats. We see young people’s comfort with digital messaging anecdotally at every corner – at bars, people use text messages to pick-up potential dates (Stein, 2011); during tough times people use texts for emotional support (Persch, 2008). Texting, email, and online chats have become such important parts of peoples’ lives that some religious young adults find it difficult to stop even if it means breaking religious law (Goldberg and Pelcovitz, 2011) or texting during sermons (Voltattorni, 2011). Some people are so addicted to text

messaging that they sleep with their phones under their pillows so as not to miss a single message (Lohmann, 2011) and others experience texting-related thumb pain (Hafner, 2009).

This anecdotal evidence forces us to question the accepted doctrine that people are more comfortable speaking in person than they are communicating with written messages. In 1998, Valley, Moag and Bazerman published a study showing that parties in written negotiations found it difficult to establish a basis of trust, when compared to people negotiating in-person or on the phone. This study was conducted less than twenty years ago, but in that short time its implications may have become less pertinent for the new generations of communicators. Similarly outdated are the studies Valley and colleagues cite from the 1950s to the 1980s showing that face-to-face communication increases the likelihood of cooperation. Among U.S. 13-17 year-olds who send an average of 3,417 text messages a month, and 18-34 year-olds who send 2,842 a month (Nielsen 2011), many believe there to be strong communication using written digital messages. The strength of this communication among Millennials and other people comfortable with digital media is evident when we look at the success of virtual teams (Erez et al., 2013) and online support groups (Stephen et al., 2014).

This change in communication behavior calls into question many of the accepted wisdoms regarding conflict resolution. In this paper we seek to uproot the notion that face-to-face communication is best for developing trusting and cooperative relationships, and show that in today's society digital communication can be useful for these ends.

Empirical Hypotheses Development

Millennial Communication

As discussed above, there is significant anecdotal evidence that Millennials prefer digital communication over in-person discussions. Before understanding *how* Millennials use digital communication we test this hypothesis:

Hypothesis 1. *Millennials prefer digital communication over face-to-face communication.*

Millennial Cooperation

Cooperation is learned socially, and can be developed in different ways. The culture of the Millennial Generation cultivated cooperation through online messages and the like, perhaps even more than it has encouraged that type of trust in face-to-face discussions. Furthermore, because of the strong role that email and digital texts play in the culture of the Millennial Generation (Bryant et al 2006), these users are even more accustomed to sharing information online, and to picking up on cues about when that information is trustworthy. Millennials experienced a socialization of using digital communication for sharing information and developing relationships, and are therefore well-equipped to use emails and texting for trusting, relationship-building, and cooperative ends.

Howe and Strauss (2007) describe the Millennial Generation: “As the first generation to grow up with mobile digital technology, Millennials expect nonstop

interaction with their peers in forms that would have been unimaginable to prior generations of young adults. They will develop new standards for social networking, identifying a clear range of acceptable online attitudes and behaviors.” The purpose of the empirical studies in this paper is to identify and understand these new standards.

This discussion of Millennials is consistent with the accepted literature regarding the use of communication in solving social dilemmas. Messick and Brewer (1983) suggested four reasons why communication increases cooperation. They write that through communication:

1. Individuals can learn information about the choices others are likely to make.
2. Group members can make explicit commitments about what they will do.
3. People can persuade others about the morally “right” thing to do.
4. People can feel a stronger sense of group identity.

Each of these reasons can retain its effectiveness given the socialization of Millennials as digital communicators:

1. People who are accustomed to sharing information about themselves and their plans using digital communication (Hypothesis 1) can share and learn about the choices others are likely to make.
2. Digital commitments are recorded and searchable, and therefore can be even more reliable than spoken commitments.
3. Moral arguments can be made digitally. People can, and do discuss issues of ethics and morality through digital texts and online forums. (For example, the

social news site Reddit has an entire section devoted to discussing ethics and its application to current events.) Furthermore, since online arguer has a chance to think about the issues before they type, they may make clearer arguments. The reader also has more time to read and consider the arguments than if they were made verbally.

4. People can connect through sharing emails, texts, and instant messages, in a way which reinforces their group identity as digital communicators.

Additionally, in some contexts digital communication gives people a greater sense of safety, allowing them to share more online (Stephen et al., 2014).

Messick and Brewer's (1983) arguments for why communication encourages cooperation apply just as well to Millennials who use digital communication. Therefore we hypothesize that:

Hypothesis 2. *For Millennials, online messaging is at least as effective in encouraging cooperation as face-to-face communication.*

As discussed above, a critical aspect of cooperation is the development of cooperative norms. Therefore we look not only at the short-term effects of cooperation immediately following communication, but also at the development of cooperative norms for a group. Here too we expect that communication will advance the development of cooperative norms. For Millennials who are accustomed to developing social norms through digital media:

Hypothesis 3. *In the long term, online messages encourage more cooperation than in-person communication.*

Similarly, we expect that by using and getting comfortable with digital communication, people learn about cooperative and trusting norms that emerge over these media. In particular, people who experience trustworthiness through digital communication learn that these norms exist.

Hypothesis 4. *People learn to trust using digital communication through repeated digital interactions with positive feedback.*

Non-Millennial Cooperation

While Millennials are accustomed to communicating through digital media, people born before this time (for the most part) were not raised to trust and cooperate online to the degree that they trust and cooperate in-person. Therefore, although we hypothesize that online messaging will encourage cooperation among Millennials, we do not necessarily expect this effect in non-Millennials. In general, we assume that Millennials are comfortable with digital communication and will therefore be able to build trusting and cooperative relationships through that media. We expect this effect to apply similarly to non-Millennials who are also comfortable communicating digitally. On the other hand, people who are not comfortable with this media will find it more difficult to build trusting and cooperative online relationships.

Hypothesis 5. *For people who are comfortable communicating digitally, online messaging is effective in encouraging trust.*

Empirical Studies

Study 1

Anecdotal evidence suggests that Millennials conduct a great deal of their communication digitally. In study 1 we test this assumption, exploring how Millennials communicate with each other and whether the mode of communication affects their ability to build trusting relationships.

Method

Participants were recruited to a behavioral lab. They read an article about a physician whose patient tells him he committed a crime. The participants were then paired with each other and chatted with their partners for five minutes. On half of the days the study ran, participants spoke with their partners in person. On the other half of the days, participants sent each other digital texts through an online texting system developed for this study. (Participants chose a day to come to the lab which fit their schedules, not knowing that there were differences between the days.)

Participants then played a trust game with the same partner. The game is modeled after the investment game designed by Berg, Dickhaut and McCabe (1995). One participant (the sender) in each pair received \$3. The sender then decides how much of the \$3 to send to her teammate. The teammate receives triple the amount of money the sender sent, and then decides how much of this to send back to the sender. Participants were given full instructions on how to play the game, examples, and test questions.

This game was designed to test the extent to which self-interested rational thought guides human behavior and where trust plays an important role. The prediction based on the unique sub-game perfect Nash equilibrium is that the sending participants would not send any money. However what Berg et al. (1995) found was that 55 out of 60 times they did send money. The authors explain that, “Subjects were willing to place a trust, by risking some amount of money, in the belief that there would be reciprocity.”

In our study we measure trust using a continuous variable of how much money the senders send. We compare the amounts sent by participants who spoke to their teammates in person with the amounts sent by participants who chatted digitally. We also test the assumption made by Berg et al. (1995) that willingness to risk is based on a belief in reciprocity by explicitly asking participants how much money they expect to receive in return. To verify the internal reliability of the trust game, we ask participants a series of questions regarding the trustworthiness of their teammates, based on Johnson-George and Swap (1982) and Dunn and Schweitzer (2005). (See Appendix A.) Participants were also asked questions about their teammate’s competence and warmth (also termed “positive affect”) adapted from Fiske, Cuddy, Glick, and Xu (2002) and Dunn, Ruedy, and Schweitzer (2012), and rapport questions, adapted from Jap, Robertson and Hamilton (2011). (See Appendices B-C.)

We also asked participants to answer the question:

In general, I talk to my friends using (please rank from 1 being the most used to 8 being least used): Phone (talking), Texting, E-mail, Gchat,⁶ BBM,⁷ Facebook, In person, Skype/Video chat

Results

Summary. 174 people participated in the study, aged 18-34, with an average age of 21.0. One participant did not complete the questions in the study and was not included in the analysis. Four participants were over the age of 30 as of the date of the study (April, 2014). Removing these age-outliers from the study did not significantly affect the results. Fifty-five of the participants were male, 143 were raised in the United States, and 145 were native English speakers.

Communication Preference. Most participants (51%) responded that in general, they talk to their friends using written digital communication. Sixty-six participants cited texting as the way they communicate most with their friends, 17 answered Facebook, and 7 replied either E-mail, Gchat, or BBM. In contrast, 84 participants said they primarily communicate with their friends in-person, and 4 answered by phone (Hypothesis 1).

Because this study was conducted in a behavioral lab, many of the participants (92%) were students. Most of the students on this particular campus live either on-campus or in off-campus housing nearby with other friends, meaning that these are

⁶ Gchat is short for Google Chat – a texting service that appears on the Google Email page, as well as on smartphone applications.

⁷ BBM (BlackBerry Messenger) is a texting service for BlackBerry phones.

people who live in unusually close proximity to many of their friends. They have roommates, hall mates, housemates, classmates, etc they can see in person very easily. Even so, these participants report that they primarily communicate with their friends via written digital communication. Given these results, we expect that Millennials who do not live in a campus college environment would prefer, a priori, to communicate with their peers digitally rather than in-person.

Difference between face-to-face and text. There was no significant difference between the 45 participants who sent money after interacting face-to-face (averaged \$2.36, standard deviation 0.88) and the 42 participants who sent money after interacting digitally (averaged \$1.94, standard deviation 1.17). Those who gave more than zero were asked how much they expect to receive in return. Here too there was no significant difference between the groups, with those who interacted face-to-face expecting 47.3% return and those who interacted digitally expecting 43.0% return ($p = 0.60$) (Hypothesis 2).

Although communication media did not play a role in how much the senders trusted the people in the receiver role, the latter were affected by the type of communication. Those who communicated face-to-face returned 44.89% of what they received, whereas those who communicated digitally returned only 27.08%. This issue is not about trust, but rather about reciprocity; responses to the trust questionnaire did not predict the percentage participants in this role sent back ($p = 0.14$), however rapport and positive affect were significant indicators for the percentage returned ($p < 0.05$). This indicates that although the senders who communicated digitally trusted their counterparts

just as much as senders who communicated in person, the digital counterparts did not reciprocate.

Table A1. Difference between face-to-face and digital texts in trust game outcomes

Manipulation Check. The money given in the trust game can be explained by the amount those participants expected to receive in return ($p < 0.05$), as well as by their responses to the surveys of trust ($p < 0.01$), rapport ($p = 0.001$) and positive affect ($p < 0.05$).

Table A2. Correlation of money sent in trust game with trust, rapport, and positive affect survey responses

Discussion

In study 1 we found support for our hypothesis that Millennials prefer digital communication over face-to-face communication. We also have some support that Millennials build trusting relationships just as well with digital communication as they do in person. In the rest of the studies in this paper, we analyze this relationship more closely, looking for further support for this hypothesis in different settings and for a greater understanding of the effects of digital communication on trust building.

Study 2

Method

Background. Study 1 provided support for our hypothesis that Millennials build trusting relationships with digital communication at least as well as they do with face-to-face communication. Previously (in the theoretical section of this paper) we discussed the relationship between trust and cooperation, positing that trust is necessary for cooperation in certain situations, such as the prisoner's dilemma (Morgan and Hunt, 1994; Yamagishi and Yamagishi, 1994). In study 2 we use a game modeled after the prisoner's dilemma to see whether the strength of digital communication in developing trust (as we saw in study 1) will apply to developing cooperation as well. In this study we ask: given that Millennials who communicate digitally trust more than Millennials who communicate face-to-face, will they cooperate more as well?

Much prior research on communication media (including our study 1) in negotiations uses laboratory settings (Valley et al. 1998) or arrangements where the participants meet their counterparts for the first time during the negotiation (Moore, Kurtzberg, Thompson & Morris, 1999; Naquin & Paulson, 2003). Study 1 followed this model in which the "getting-to-know-you" stage of the negotiators is part of the negotiation itself. The two parties have only the tested mode of communication to build rapport and develop trust. Additionally, the parties in a lab-based negotiation are unlikely to see each other after the study. Thus they are not interested in building long-term relationships.

Most business negotiations involve people who have ongoing relationships, which begin before the negotiation takes place and continue for long after the negotiation

(Morgan & Hunt, 1994; Sirdeshmukh, Singh, & Sabol, 2002; Webster, 1992). These types of actual relationships are difficult to mimic in a lab. Additionally, the implicit variability in individuals' concern for certain relationships and not for others, because of personal preferences (e.g. they like one person more) or expected utility from the relationship (e.g. they believe this person might be able to get them a job,) cannot possibly be replicated in a fabricated setting.

Instead, for study 2 we used a negotiation to test the hypothesis in a situation where individuals have ongoing relationships with the other participants, and where there is a natural variation in allegiance to those relationships. The data in analysis are from a game played by undergraduate and MBA students at the Wharton School of the University of Pennsylvania.

There is variation in the strength of these relationships, as different classes play the game at different points in the semester, and individuals within the classes had different experiences with others before this game, and often have relationships with the same people external to the class setting. In many ways this setting mimics the reality of many business negotiations. Reality may put old friends at opposite sides of the table, or might compel people who had negotiated with each other previously to interact again.

These data focus on a specific age group – those who were undergraduate or MBA students between 2003 and 2010, which means that most participants were born between 1980 and the early 1990s, putting most of them in the Millennial Generation (Howe and Strauss, 2007). This allows us to understand more about the way a generation heavily influenced by modern technology communicates.

Design. The game is a negotiation which is a simulation of OPEC decision making, designed by Maurice Schweitzer and run by the Wharton Learning Lab (Wharton School, University of Pennsylvania). Each “world” consists of 3 “countries.” Countries usually have 2-4 members. Each country sits in a different room with a computer screen. Each country simultaneously decides how much oil to produce for that round. Participants are then told the results of the round, and play another round. All countries are given the same profit function, which depends on the quantity which that individual country produced and the price per barrel. Profit = $Q_i(P-C)$. Marginal cost (C) is constant. The price is decided based on total production of the world (the more produced, the lower the price). The goal for each country is to maximize profits. (See Appendix E for full instructions.)

The profit-maximizing production for each world is 38 million barrels per country per round. If all three countries in a world produce at this level, the resulting price is \$35.80 per barrel. Transcripts of messages sent between countries, as well as discussions with the students indicate that the students immediately recognize 38 million as the cooperative production level.

Each round the students saw a screen summarizing the world’s activities in prior rounds (Appendix F). After they play the game, the students analyze the results together with the professor and the rest of the class. In approximately 95% of the classes, students are graded on the outcome of the results. Professors and students from the graded and ungraded classes say anecdotally that students take the game very seriously.

Independent variables. The number of rounds (between eight and twenty-five) and simulation events are decided by the professors prior to the game. These details are not given to the students before the game. They do not know how many rounds of the game will be played. They do know how much time is allotted for the game, and the final round is announced before their final round decisions. The control variables include round number, whether it is the final round, and various simulation events. Two of these are communication events:

- Countries may send short digital messages to other countries in their world.
- Countries send representatives to an in-person meeting with the other country representatives from their world.

Dependent variable. The OPEC simulation presents a prisoner's dilemma in which the countries can defect by producing at a high level (thereby decreasing the world price while increasing the country's profit) or cooperate by producing at a low level (thereby increasing the world price).

We measure behavior using price per world in each round following a simulation event. Since the price incorporates the individual countries' production, focusing on price simplifies the analysis, allowing us to look at 427 worlds instead of 1,281 individual countries. The more cooperative the countries are, the closer each country's production will be to 38 barrels, and the closer the price will be to \$35.80. When countries defect, they produce more barrels (for higher individual country profitability, at the expense of world profitability). The higher total production for the country, the lower the price will be in that round. Thus higher price indicates greater cooperation.

Results

Summary Statistics. This game was played 621 times by Millennials between 2003 and 2010 in undergraduate and MBA classes at Wharton. Only games with at least one round of each communication type, (face-to-face communication, computer messaging, and no-communication,) were included in the analysis. Games with missing data (57) or without all communication types (67) were excluded. Games played by groups other than MBAs and undergraduate students were also excluded (70). There were 427 worlds, (1,281 individual countries,) in the remaining set that had both messaging and face-to-face rounds.

Each game consisted of 8-25 rounds. The average price per barrel was \$23.75, with the first round average of \$24.72 and the last round average of \$16.36. The minimum price in the game was -3.41⁸ and the maximum price was \$46.80⁹. Of the 5,666 rounds played among the 427 worlds, 6% had prices at or above the profit-maximizing \$35.80 and 2% had prices below the marginal production cost (\$1).

Behavioral Measure. We regressed price per country in each round as a continuous dependent variable. The control variables include round number, whether it

⁸ Negative prices were allowed in this game. A price of -3.41 means that the countries lost \$4.41 (the price and the marginal cost of \$1) for each barrel they produced. It indicates a global production level close to the maximum production possible in the game.

⁹ The \$46.80 price is above maximum profitability, as all countries could be producing more for a lower price and higher profitability.

is the final round, and various simulation events, including the two types of communication (in-person and digital messaging) which occur before the round starts.

Other simulation events include whether after the round countries will find out the individual country production for the round, or only the total worldwide production. This usually changes mid-game, and participants are told before the round what details will be revealed. Another simulation is whether a fourth computer-generated country will be producing in the world, which produces a random but small number of barrels. The students are told before the fourth country enters. The effects of these variables, as well as the two communication variables of interest (messages and face-to-face communication,) are shown in Table B1.

Table B1. Undergraduate and MBA OLS Regression on Price

The results in Table B1 show that when participants are allowed to send messages to each other they cooperate significantly more than in other rounds. That is why there are higher prices during the rounds immediately following the messaging, as compared to rounds with no communication (significant at the $p < 0.001$ level). Face-to-face communication also corresponds to higher prices; however this effect is significantly weaker than the messaging effect. (There is a 0.73 increase in price for rounds following face-to-face communication as opposed to 4.10 for messages.) These results indicate that the rounds preceded by one-line messages over the computer elicited more cooperative behavior (lower production, higher prices, and higher profits,) than the rounds preceded by in-person communication (Hypothesis 2). This effect remains significant even when

controlling for other simulation events, such as whether participants were given individual-level output figures and whether a fourth country was included, as detailed above.

Likelihood of cooperation. In addition to the regression outputs looking at price as a continuum, we can also think of cooperation in terms of the likelihood of a “good price.” The profit-maximizing price is \$35.80, and prices above \$34 or \$35 indicate significant levels of cooperation among the three countries in the world. To test the likelihood of achieving a cooperative price, we ran probit tests of the same data discussed above. The results (in Table B2) show that worlds were significantly more likely to reach a “good price” of at least \$34 [or \$35] after a messaging round than they were after the in-person communication rounds.

Specifically, worlds were 38.5% [37%] more likely to reach a price greater than or equal to \$34 [\$35] after messaging than they were in a round with no communication, whereas the face-to-face communication did not significantly impact the likelihood of a “good price.” This provides further support for hypothesis 2.

Table B2. Undergraduate and MBA Probit: Likelihood of Non-Cooperation

Medium-term effects. There are a number of mechanisms which can explain these results. It is possible that the arrangements made for cooperation during the messaging rounds are enacted immediately (in that round) while the cooperation prompted during in-person communication is more long-term. This would be true if, for

example, the participants made arrangements during the face-to-face communication for short-term revenge and long-term cooperation (i.e. “This round one team can defect and then next round we will all cooperate,”) whereas the short messages are more straightforward (i.e. “All teams produce 38.”)

The long-term nature of cooperation is not captured in ordinary least squares regression so to test this hypothesis we ran an event study. This is a subset of regressions which allow us to analyze the mean effects of each communication type in the round immediately following the communication, and in the two and three rounds after communication. The results are presented in Table B3.

Table B3. Undergraduate and MBA Event study showing mean abnormal price

Prices in the rounds immediately following messaging were significantly higher (by about \$5.58) than the expected price in the absence of communication. Furthermore, this effect lasted, although diminished, for two and three rounds after the messaging took place (with increases in prices averaging \$4.56 over each of the three rounds). The face-to-face communication did not elicit similar price increases. The first round after the face-to-face communication had no significant change (-0.04) from the expected price without the communication. Although including the second round increased the observed cooperation after the face-to-face communication, the \$1.13 average increase for two rounds and 59 cent increase for 3 rounds does not come close to the \$5.51 and \$4.56 increases in the medium-term following the messaging rounds.

The results from the event study suggest that the messages encourage higher prices (greater cooperation) than face-to-face discussions, not only in the round immediately following communication, but even two and three rounds later. This suggests that even if the in-person discussions elicit more long-term planning, they still do not elicit the same long-term cooperation as short online messages (Hypothesis 3).

Generational Effect. In this paper we suggest that digital messages are likely to elicit more cooperation than face-to-face communication, specifically for a population which is socialized to communicate trust and cooperation online and through text messages. We therefore hypothesized (Hypothesis 2) that for participants in the Millennial Generation sending short messages will elicit at least as much cooperation as in-person communication. We showed this in the analysis above, which included only participants who were MBA or undergraduate students during 2003-2010, most of whom are in the Millennial Generation. In order to test whether this effect is only true for this age group, or whether it could apply to other constituencies as well, we analyzed data from Wharton's Executive MBA classes during the same time period. These participants played the same game, and in many ways are similar to the regular MBA students, aside from their age and experience.¹⁰ For the executive MBA participants, in-person communication encouraged greater cooperation (higher prices) than sending messages. This supports the idea that the strength of messaging in encouraging cooperation only

¹⁰ The average age for starting the Wharton undergraduate program is 19, MBA 28, and Executive MBA 34 (Wharton Programs Comparison Table, 2011).

exists among people who have been socialized to trust and cooperate using online messaging – specifically, the Millennial Generation.

The Executive MBA students showed slightly higher prices after the face-to-face interaction than in the message rounds, though this difference is not significant at the $p < 0.10$ level. What is significant is the difference between the cooperation after in-person communication among Executive MBAs and among the undergraduate/MBA group ($p < 0.05$). This suggests that the Executive MBAs and the undergraduate/MBA group use the face-to-face time differently, as it has different effects on the prices of the following rounds.

Table B4. Executive MBA OLS Regressions on Price

Table B5. Undergraduate, MBA and Executive MBA OLS Regressions on Price

Limitations

It is possible that the distinction between the Executive MBA and the other student groups is related not to age, but rather to difference in negotiating skills and business experience more generally. Here it is interesting to point out that the Executive MBA participants were overall less cooperative than the MBA and undergraduate students. The average price for Executive MBA games was \$19.26, as opposed to \$23.75 for the other students. Additionally, 4% of the Executive MBA rounds had negative profitability (with a price below the marginal cost of \$1) as opposed to 2% in the younger

group. In any case, there may be other differences unrelated to age which account for the different effects of messaging and in-person communication.

An alternative explanation for the results of this study is that other differences between the types of communication affect success in encouraging cooperation. Messages are sent by all of the students in the country together (albeit with only one typist), whereas only one representative per country is sent to the face-to-face meeting. This issue requires further study to identify whether there is an agency effect which encourages lower production after in-person communication.

Furthermore, in this data we do not record exact ages of each of the participants. We assume generalizations about which groups are Millennials based on the age information provided by the Wharton programs comparison table. We also assume that the large sample size in this study makes the age outliers in each group less statistically relevant. However additional research is needed to validate the difference between the age groups using more closely defined and differentiated age groups.

Even when taking into account the various limitations to this study, the analyses support the hypothesis that Millennials are more likely to cooperate when discussing joint strategy through short computer-based texts than they are when they discuss the strategy in-person.

Study 3

Given the limitations of study 2 we conducted further studies in which each participant had a direct relationship with the person with whom they communicated, and where we collected data on age, gender, and other independent variables. Study 3 had a similar goal as studies 1 and 2 - to further understand the effects of digital communication on building trust and rapport. In this study we surveyed students after they played a “house sale” game in their negotiations classes. In this game, students in a negotiations class are randomly assigned to the roles of buyer, buyer’s agent, seller, or seller’s agent. They are given an explanation of the house they want to buy/sell and the values of different household items and aspects of the house which can be negotiated as part of the sale. For this negotiation, the buyer and seller are each only allowed to talk to their agents. The agents are allowed to talk to each other and to their principals. For many classes this game is played outside of the classroom, so the principals and agents talk to each other in whatever ways are easiest for them.

Method

We surveyed participants after they finalized the negotiation (either with a final sale or a decision not to buy/sell the house) but before they discuss the outcome of their negotiation with the rest of the class. In the survey we ask about the primary mode(s) of communication they use to discuss this negotiation with their agent/principal. We compare these to the level of trust (Johnson-George and Swap, 1982) and rapport (Jap, Robertson and Hamilton, 2011) which they report about their agent/principal.

When people trust each other they are more likely to be open about things they are concerned with (Johnson-George and Swap, 1982). In addition to asking about this in the trust questionnaire, we also directly tested openness in the communication itself. Before the negotiation begins the sellers, buyers, and buyers' agents are told that the house has asbestos that needs to be removed. The sellers' agents are not given this information. We compared which sellers are open about this defect with their principals.

In addition, we took advantage of the fact that this negotiation exercise includes a wide range of possibilities for agreement which included benefits for all four parties. Those who did not reach a deal missed out on an opportunity for surplus. We compared this outcome – whether the students reached a deal – for students who communicated using different media.

Results

The students surveyed were born between 1988 and 1993; they are all Millennials. Of the 120 students who responded to the survey, 10 primarily used written digital communication (text messages and emails,) 91 primarily spoke in person, and 17 talked over the phone. There were no significant differences in reported trust or rapport between the groups. Two students primarily used Skype; they reported lower trust and rapport, but we cannot draw significant conclusions based on these two responses.

Table C1. Trust and rapport by primary communication type

Openness. All of the sellers who communicated digitally and over the phone discussed asbestos with their principals at some point. In contrast, four (10%) of the sellers and sellers' agents who primarily communicated in-person did not discuss asbestos with their agents/principals at any point during the exercise. The sellers who communicated digitally with their agents not only were more open about the asbestos, but also tended to open up about this issue early on in the negotiation; all of the sellers and sellers agents who communicated digitally reported discussing asbestos early in the exercise, whereas 60% (6/10) of those who communicated via phone and 70% (28/40) of those who communicated in person reported discussing it early on.

Outcome. None of the students who primarily communicated via written digital communication reported that they did not reach a deal. In contrast, ten students (11%) who primarily communicated in person reported that they did not reach a deal.

Discussion

In study 1 we randomly assigned participants to a type of communication; in study 2 we analyzed the behavior of participants who were required to use both digital and in-person communication. In this study the participants chose which communication type to use. If we assume that students only used communication with which they were comfortable, we can use this study to isolate the effects of different types of communication without the effects of comfort with those media. What we find is that there is no significant effect of type of media on trust or rapport in this setting. Furthermore, people who communicated digitally were more likely to be open in their

conversations with their agents and were more likely to reach a deal. This study supports our previous findings that in contrast to prior research, communicating digitally does not detract from trust and rapport, but rather encourages openness and working together.

Study 4

In studies 1-3 we saw that Millennials communicating digitally can and do build trust. These studies treat all digital communication in the same category. Not all face-to-face conversations are the same; the language people use, the length of time people talk, the content of the discussion, and the tone of voice all impact to what extent communication encourages trust. Similarly, we expect that not all digital communication is the same. In study 4 we look at what styles of digital communication are most effective in building the trust we saw possible in studies 1-3.

Method

Mechanical Turk online survey participants were recruited to read an article and play an online game in exchange for a small reward. Participants read an article about a physician whose patient tells him he committed a crime. The participants were then paired with each other and chatted online with their partners for five minutes. They were asked to chat about the article, which 81% did.

Participants then played a trust game, similar to the game played in study 1, modeled after the investment game designed by Berg, Dickhaut and McCabe (1995). (The sender receives \$3, chooses to give some of this to the receiver who receives triple whatever was sent and then chooses to send some of it back.) We measured trust using a continuous variable of how much money the participants send. We also asked the same

set of survey questions as in study 1, measuring trust, rapport and positive affect. (See Appendices A-C.)

A research assistant coded the texts of the chats for whether they had a conversation, whether that conversation included a discussion of the article, whether the conversation included strong feelings about the issue one way or another, whether the participants discussed their emotions, and whether the participants used “texting words” (such as “ttyl” or “thx”) or emoticons.

We analyzed results from the 254 participants who were raised in the United States. Some of the participants (101/404 total, 50/254 US-raised) did not have conversations at all, as they preferred to spend the five minutes doing something else. These participants were excluded from our results. We analyzed the results from 204 participants who had conversations and were raised in the United States, of which 200 played the trust game. (Two pairs did not answer the test questions about the trust game correctly and did not play.) For the purpose of these analyses, we classified Millennials as people who were between the ages of 18 and 31 during the time of the study (November, 2013) putting their birth years between 1982 and 2005 (part of the Millennial Generation, according to Howe and Strauss, 2007).

Results

Summary. The 100 participants in the “sending” position in the game sent on average \$1.92 (out of a possible \$3). Twelve participants sent nothing and 36 sent the full \$3. The participants in the “return” position returned \$1.52 on average. The

maximum returned was \$6 and 24 participants who received more than zero returned zero.

Participants in the sending position expected to receive 36.73% of the money received by their partner (equivalent to a 10.2% return on the “investment”). Thirteen of these participants thought they would not receive any money back from their partner.

Texting Style. The participants whose conversations included texting words and emoticons sent slightly more money in the trust game, but had slightly lower values on the rapport, trust, and positive affect surveys. These scores were not significantly affected by whether the participants were Millennials. Because these differences are not statistically significant, and the surveys do not support the same hypothesis as the outcome of the game, we conclude that using “texting words” and emoticons did not affect trust-building in this study.

Discussion content. Not surprisingly, the more people chatted, (measured by the number of words exchanged,) the more they developed trust ($p < 0.05$) and rapport ($p < 0.001$) and the more positive affect they felt about their counterparts ($p < 0.001$). As expected, longer conversations meant more time getting to know each other, developing stronger relationships. Another possibility is that people who liked each other more were also more likely to talk for longer periods of time. This would mean that the positive affect between the chatters effected greater trust and encouraged participants to exchange more chats.

What was interesting in this study was the content of that discussion. Particularly, our research assistant coded whether the participants discussed the article. Most participants who did not discuss the article texted “small talk” (e.g. asking where they are from, how often they do Mechanical Turk surveys, etc.) whereas participants who discussed the article were more likely to have meaningful conversations, exchanging ideas about patients’ rights and doctors’ responsibilities. The twelve participants in the sending position who didn’t discuss the article sent significantly less money in the trust game than the 88 who did discuss the article ($p < 0.05$). Additionally, the participants in both positions who discussed the article reported significantly more trust, rapport, and positive affect than those who did not. This indicates that people who have more meaningful conversations were more likely to build trusting relationships through those conversations.

Table D1. Mechanical Turk Trust Game: Effect of discussing article on money sent and trust survey responses

Table D2. Mechanical Turk Trust Game: Effect of discussing article on rapport and positive affect survey responses

Table D3. Correlation of money sent in trust game with trust, rapport, and positive affect survey responses

Millennials. When both participants in a pair were Millennials (aged 18-31) the sender sent more money ($p < 0.05$). However other than that effect, we did not find that whether participants were Millennials significantly affected trust and relationship development in this forum. This may be due to a selection bias with this sample.

Mechanical Turk is an online survey platform in which participants choose to do online activities in exchange for a small reward. The people who sign up for and use Mechanical Turk often spend many hours a day answering online surveys, and therefore people of all ages who use this platform will be comfortable with the online setting and accustomed to communicating in this way. In this sense, the non-Millennials become like Millennials in terms of their frequent use of online communication.

To verify this hypothesis we asked participants at different points in the survey to rate their use of different forms of communication by answering the following questions:

In general, I feel most comfortable using...

In general, I talk to my friends using...

Participants then had a list of communication media (Phone, Texting, E-mail, Gchat, Blackberry Messenger, Facebook, In person, Skype/Video chat) which they rated 1 to 8.

We looked at people who answered “1” (feel the most comfortable/use the most when talking to friends) to digital media (Texting, E-mail, Gchat, Blackberry Messenger, Facebook). For the first question, 68/125 Millennials and 34/79 non-Millennials reported they were most comfortable using digital media ($p = 0.12$). On the second question, 68/125 Millennials and 38/79 non-Millennials reported talking to their friends most often through digital media ($p = 0.38$). It seems that with the tested group, Millennials and non-Millennials have similar levels of comfort and experience with digital communication. This could explain why we did not see significant differences between the two groups in their ability to build trust and rapport online (Hypothesis 5).

Discussion

We saw in studies 1, 2, and 3 that people can use digital communication to build trust. Study 4 explores the next aspect of this research – what about digital communication builds trust? Instead of focusing on who is communicating (or how old they are) this study analyzes the content of digital communication. In particular, we found that digital communication builds trust much the same way that non-digital communication builds trust. The more people communicate, the more positively they think about each other, the more trust they build and the greater rapport they develop with one another. Additionally, people who had a discussion beyond small talk (in our case, people who discussed the ethical, legal and emotional aspects of the article,) were more likely to develop positive relationships – with increased trust, rapport and positive affect.

Study 5

In study 5 we take the results from the previous studies – that people build trust via digital communication – and try to understand whether this trust changes over time as people get more comfortable with a particular digital medium. In this study we challenge the assumption that Millennials are more likely to trust when communicating digitally because they are comfortable with digital communication, and we ask whether people of all ages can learn to use digital communication in a way that will help them trust. For this study we hypothesize that digital trust can be learned over time through repeated digital interactions with positive feedback.

Method

For this study we used “Glide,” a smartphone application which allows people to both text each other and to send short video clips. The dependent variable was the same trust game from Berg, Dickhaut and McCabe (1995) as in Studies 1 and 4. (Sender receives \$3, chooses to give some of this to Receiver who receives triple whatever the Sender sent and then chooses to send some of it back.)¹¹

¹¹ There are differences between this game in study 5 and the games in studies 1 and 4:

- In study 5 the game is repeated multiple times.
- In studies 1 and 4 the participants first read an article which they were instructed to discuss. Participants received instructions about the game only after the discussion with their teammates. In study 5 participants received instructions about the game first, and then communicated with their teammates, so the natural topic of communication was the game itself.
- In study 5, the Receiver role was played by a confederate.

We recruited participants from Mechanical Turk who have an iPod, iPhone, or Android phone with a 3G, LTE, or Wi-Fi internet connection. (Five people who started the game left because they did not have a supported platform.)

We asked participants to download the Glide application. Participants received instructions for how to play the trust game and answered questions to ensure they understood. Then we asked participants to use a specific form of communication (either texting or video messaging) and paired them with a partner through Glide. We confirmed that the participants were using the type of communication we assigned. Then each participant communicated with a partner for three minutes, after which they played the trust game with that partner. They then communicated with a different partner and played another trust game, a total of four times.

Participants were randomly assigned to communicate via:

- text messages for all four rounds

- video messages for all four rounds

- text messages for rounds 1-3, video messages for round 4

- video messages for rounds 1-3, text messages for round 4

Participants were not told how they would communicate in future rounds.

Because we are primarily interested in the trusting aspect of the trust game – how much the first person sends – the receiver/replier was played by a confederate. This also allowed us to control for the content of the conversations and the feedback that participants received after each round about how much money was returned. The confederates were instructed to have a picture of themselves on the application so that even people who chatted via text knew what their partners look like.

After each round of chatting and sending money in the game, participants were asked brief questions about trust and rapport they felt for the other person. They were then told how much the other person sent back to them. These numbers were predetermined rounded multiples of the amounts they sent.¹²

We informed participants in the beginning that they will play the game multiple times (each time receiving a new \$3 to play with) and will be paid based on the results of one of these games, chosen at random. This controlled for the wealth effect.

Results

Ninety-one people started the survey. Five were ineligible for technological reasons (they didn't have the supported platform to run Glide); 4 had other technological problems; 17 answered the game comprehension questions incorrectly; 2 answered questions in a way which made it clear they were not paying attention to the study. 63 participants participated in the full study, 30 male, aged 19-67, with average age 30.5.

Text vs. Video. Confirming results from previous studies, participants who texted with each other had as much trust as those who sent video messages back and forth. In the first round of chats and trust games both text chatters and video chatters sent

¹² Automated trust game responses based on \$ value sent by senders:

Round 1: ||1.2 * amount sent||

Round 2: ||1.8 * amount sent||

Round 3: ||1.5 * amount sent||

Round 4: ||0.8 * amount sent||

\$2.00 on average (standard deviations 0.95 for text, 1.15 for video). For the first 3 rounds the text chatters sent \$2.18 on average (standard deviation 0.90) and the video chatters comparably sent \$2.16 (standard deviation 1.12).

In this analysis Millennial status did not play a significant role in trust using different communication media. As in study 4, we expect that this is because people who use Mechanical Turk and have the technological platform for running the Glide application (a smartphone or tablet) are adept and comfortable with text chatting. To confirm this hypothesis, we asked these participants how they generally talk with their friends. Only 18 responded that their primary communication with their friends is in-person, and 10 responded that talking on the phone is primary. In contrast, 35 participants (56%) responded that they primarily communicate digitally, either through text messages (24) video chats (2) email (1) or other online chats (8). Whether people primarily communicated digitally was not correlated with their age (correlation -0.21) or millennial status (correlation 0.23).

Learning to Trust. People communicating via text message or video message learn to trust more over time through repeated interactions with positive feedback. In rounds 1-3 participants who sent money in the game were returned more than the money that they sent. Through this process participants learned that they could trust the people they were communicating with through Glide, and over time they learned to trust more and send more money with the expectation of greater return (Hypothesis 4).

We see this progress when we compare rounds 1 and 3, as in Table E1. Both texting chatters and video chatters send significantly more money in round 3 (after two

rounds of learning to trust) than they do in round 1. Regression analysis shows the significance of the round number in predicting how much money is sent ($p < 0.05$), especially for text messages. We also looked at the difference in differences comparing text and video chatters between rounds 1 and 3 and found no significant differences between the two conditions, suggesting that people learn to trust with both types of media.

Table E1. Change in money sent in rounds 1-3 for all participants

Learning from communication media. The analysis thus far only looks at the first 3 rounds of the game, showing that in these rounds people learned to trust. It does not say whether that learning came from playing the game multiple times or from multiple positive interactions with communication media. To understand this distinction we analyzed results from the fourth round of the game, comparing them to the results from the first 3 rounds. In the fourth round, 29 participants used different media than they did in the first 3 rounds (18 switched from text to video, and 11 did the opposite).

The regression results from the money sent in rounds 1-3 show a coefficient of 0.20 (standard error .09) for the round number. If we assume a linear model, participants would have sent approximately \$2.61 in the fourth round. We ran an event study to predict a non-linear model which predicted \$2.22 sent in the fourth round. The participants who changed media in the fourth round were in line with this prediction, sending \$2.22 on average, but those who stayed with the same media sent more in the

game: \$2.46. Neither the event study nor an ANOVA repeated measures analysis showed these differences to be significant.

Even if those analyses are not significant, we can still understand whether learning that occurs in the study is because of the game or because of the media. If our hypothesis is correct and people learn from the media and not only from the game then we would expect that when people play the same game with new media, they will act similarly as they did when they started playing the game. In other words, for those who switch media in round 4, the amount they send in round 4 will be similar to the amount they sent in round 1. In contrast, those who stayed with the media they learned to trust will send more in round 4 than they did in the previous rounds.

We found support for this hypothesis in our analysis. Participants who switched media sent an amount in the round 4 game not significantly different from the amount they gave in round 1 ($p = 0.28$). Participants who stayed with the same media sent significantly higher amounts in round 4 than in round 1 ($p < 0.01$). (See Table E2 and Graph E3.) Additionally, when looking at regressions for all four rounds of the game, the round number is only significant for those who stayed with the same media (coefficient 0.18, standard error 0.07, $p < 0.05$) and not for those who changed media (coefficient 0.07, standard error 0.08, $p = 0.37$). (Neither texting/video nor millennial/non-millennial were significant factors in these analyses.)

What this analysis suggests is that the increase in trust that we see throughout the game (for participants who stay with the same media) and through rounds 1-3 (for participants who change media in round 4,) is not explained by game learning but rather

by media learning. Through repeated digital interactions, participants learned to trust people they interacted with via text and video messaging (Hypothesis 4).

Table E2. Change in money sent in round 4 for participants with the same and different media in the fourth round

Figure 2. Money sent in rounds 1-4 for participants with the same and different media in the fourth round

Discussion

Through studies 1, 2, and 3 we showed that Millennials are able to use digital communication just as well as they are able to use in-person communication; through digital communication, Millennials can build trusting and cooperative relationships, involving openness and working together.

In studies 4 and 5 we examined two particular aspects of digital communication to get a better sense of how and why this communication works. We looked at what types of texting create stronger relationships, showing that longer texting conversations that went beyond small talk generated greater trust and rapport. We also showed that the ability to use digital communication to generate trust and cooperation does not have to be defined by a person's age; even non-Millennials can learn to use these forms of communication and over time learn to build trusting relationships through digital media.

Prior research on communication in negotiations suggests that face-to-face communication will elicit more trust and cooperation than digital media (Bazerman, Curhan, Moore & Valley, 2000; Thompson & Nadler, 2002; Valley et al. 1998). Although the results from the studies in this paper diverge from this research, they do not necessarily conflict with the theories developed in that research. Rather we suggest that assumptions about how people act in negotiations change as the people and society being studied change. The change discussed in this paper is the generational effect of digital communication for the Millennial Generation (Godwin-Jones, 2005) and for the digitally-comfortable non-Millennials. The analysis in the paper recommends that people re-think conventional wisdom about the mode of communication they use when negotiating with

these groups. Thinking differently about Millennials (and some non-Millennials,) we come to new conclusions about effecting trust, and show that digital communication can be used to generate trusting and cooperative relationships.

Adair and colleagues (2004) discuss the importance of tailoring communication strategies to specific cultures. Their research on the use of both direct and indirect communication advises that, “To generate joint gains or enlarge the pie, negotiators must share enough information to understand each other’s priorities and identify trade-offs and compatible issues” (Adair 2004, p. 89). Similar research is needed on tailoring communication strategies for specific age groups. This paper begins to explore this field.

Given the importance of communication in negotiations (Balliet, 2010; Bazerman et al. 2000; Valley et al. 1998), these results have significant implications. The viability of online communication in successful negotiations is important as Millennials become an increasing percentage of the workplace (Bureau of Labor Statistics, 2013). The analysis provided in this paper recommends that Millennials and those who negotiate with them who want to encourage cooperation and trust should consider text-message-like discussions a viable and even preferable mode of communication under certain circumstances. Additionally, this paper opens up the possibility for further research on specific generational effects in understanding communication and cooperation in negotiations.

In this paper, particularly in studies 4 and 5, we started analyzing what types of texting creates greater trust. In the next paper, “Why the F*** Don’t They TRUST?” we continue this process, theorizing about and testing the effects of two particular texting behaviors: norm-violating online incivility and norm-abiding online shouting. These are

two of what we believe to be many examples of how the way people communicate digitally affects their ability to create trust and cooperation.

Tables and Figures

Table A1. Difference between face-to-face and digital texts in trust game outcomes

	Money Sent	Percentage of tripled amount expected to be returned	Percentage returned
Overall	2.16 (1.04)	0.45 (0.35)	0.37 (0.24)
Digital Text	1.94 (1.17)	0.43 (0.20)	0.27 (0.21)
Face-to-Face	2.36 (0.88)	0.47 (0.42)	0.44 (0.24)
Significance of difference between Face-to-face and Text	$p = 0.06$	$p = 0.60$	$p < 0.01$
N	87 (42 digital; 45 face-to-face)	75 (32 digital; 43 face-to-face)	73 (32 digital; 41 face-to-face)

Table A2. Correlation of money sent in trust game with trust, rapport, and positive affect survey responses

	Money sent in trust game	Percentage returned in trust game	Trust (survey)	Rapport (survey)	Positive Affect (survey)
Money sent in trust game	1.00				
Percentage returned in trust game	--	1.00			
Trust (survey)	0.30	0.18	1.00		
Rapport (survey)	0.35	0.29	0.65	1.00	
Positive Affect (survey)	0.26	0.27	0.71	0.77	1.00
N	87	73	173	173	173

Table B1. Undergraduate and MBA OLS Regression on Price¹³

	Mod 1	Mod 2	Mod 3
Intercept	22.60*** (0.09)	25.71*** (0.39)	25.43*** (0.38)
Messages¹⁴	4.76*** (0.33)	3.91*** (0.34)	4.10*** (0.32)
Face-to-Face	1.12** (0.49)	1.77*** (0.50)	0.73 (0.51)
Round		-0.40*** (0.05)	-0.26*** (0.05)
Delta¹⁵			-4.10*** (0.32)
Totals¹⁶			-0.68** (0.29)
R-squared	0.02	0.04	0.06
F Messages=Face-to-Face	44.92***	14.42***	34.62***
Number of rounds analyzed	5666	5666	5666
N (Worlds)	427	427	427

¹³ Includes fixed effects at the world level (427 groups) and robust standard errors to allow for heteroskedasticity.

¹⁴ Messages indicates round following digital messaging. Face-to-face indicates rounds following face-to-face discussions.

¹⁵ A fourth computer-generated country (“Delta”) produces in the world, which produces a random but small number of barrels.

¹⁶ After the round, countries will only find out the worldwide production and not individual country production for the round.

* p < .05

** p < .01

*** p < .001

Table B2. Undergraduate and MBA Probit: Likelihood of Non-Cooperation¹⁷

	Likelihood of Price ≥ \$34	Likelihood of Price ≥ \$35
Intercept	-0.44*** (0.07)	-0.56*** (0.07)
Messages¹⁸	0.39*** (0.04)	0.37*** (0.04)
Face-to-Face	-0.07 (0.07)	-0.09 (0.08)
Round	-0.04*** (0.01)	-0.04*** (0.01)
Delta¹⁹	-0.48*** (0.07)	-0.55*** (0.09)
Totals²⁰	0.30*** (0.05)	0.33*** (0.05)
Final Round	-0.52*** (0.13)	-0.36*** (0.14)
Number of rounds analyzed	5666	5666
N (Worlds)	427	427

¹⁷ Includes fixed effects at the world level (427 groups) and robust standard errors to allow for heteroskedasticity.

¹⁸ Messages indicates round following digital messaging. Face-to-face indicates rounds following face-to-face discussions.

¹⁹ A fourth computer-generated country (“Delta”) produces in the world, which produces a random but small number of barrels.

²⁰ After the round, countries will only find out the worldwide production and not individual country production for the round.

* p < .05

** p < .01

*** p < .001

Table B3. Undergraduate and MBA Event study showing mean abnormal price²¹

	1st Round after communication	1st and 2nd Rounds after communication	1st, 2nd and 3rd Rounds after communication
Messages²²	5.58 (0.34)	5.51 (0.24)	4.56 (0.20)
Face-to-Face	-0.04 (0.43)	1.13 (0.29)	0.59 (0.23)

²¹ In the event study we calculated the expected price without the communication rounds (and without the second and third round after) and compare those expected prices with the actual prices in the data during those rounds. The methodology used follows that outlined here http://dss.princeton.edu/online_help/analysis/eventstudy.html.

²² Messages indicates round following digital messaging. Face-to-face indicates rounds following face-to-face discussions.

Table B4. Executive MBA OLS Regressions on Price²³

	Mod 1	Mod 2	Mod 3
Intercept	17.25*** <i>(1.28)</i>	22.94*** <i>(1.44)</i>	23.16*** <i>(1.46)</i>
Messages²⁴	6.23*** <i>(1.09)</i>	4.68*** <i>(1.03)</i>	4.31*** <i>(1.12)</i>
Face-to-Face	7.24*** <i>(1.33)</i>	6.43*** <i>(1.31)</i>	6.04*** <i>(1.38)</i>
Round		-0.55*** <i>(0.12)</i>	-0.53*** <i>(0.13)</i>
Delta²⁵			-2.53** <i>(1.06)</i>
Totals²⁶			0.11 <i>(0.92)</i>
R-squared	0.07	0.13	0.14
F Messages=Face-to-Face	0.76	2.59	2.54
Number of rounds analyzed	654	654	654
N (Worlds)	39	39	39

²³ Includes fixed effects at the world level (39 groups).

²⁴ Messages indicates round following digital messaging. Face-to-face indicates rounds following face-to-face discussions.

²⁵ A fourth computer-generated country (“Delta”) produces in the world, which produces a random but small number of barrels.

²⁶ After the round, countries will only find out the worldwide production and not individual country production for the round.

* p < .05

** p < .01

*** p < .001

Table B5. Undergraduate, MBA and Executive MBA OLS Regressions on Price²⁷

	Mod 1
Intercept	26.08*** <i>(0.49)</i>
Executive MBA Messages²⁸	5.10*** <i>(1.05)</i>
Executive MBA Face-to-Face	6.65*** <i>(1.30)</i>
Young Messages²⁹	2.54*** <i>(0.40)</i>
Young Face-to-Face	1.24*** <i>(0.50)</i>
Round	-0.40*** <i>(0.06)</i>
Executive MBA	-4.70*** <i>(1.31)</i>
R-squared	0.06
F (Executive messages = Young messages)	2.03
F (Executive face-to-face = Young face-to-face)	5.19*
Number of rounds analyzed	6320
N (Worlds)	466

²⁷ Includes fixed effects at the world level (466 groups).

²⁸ Messages indicates round following digital messaging. Face-to-face indicates rounds following face-to-face discussions.

²⁹ “Young” refers to undergraduates and MBA (not Executive MBA).

* $p < .05$

** $p < .01$

*** $p < .001$

Table C1. House Sale: Trust and rapport survey responses by primary communication media³⁰

	All	Digital	Phone	Face-to-Face	Skype
Trust	5.47 (1.00)	5.45 (1.23)	5.70 (0.95)	5.46 (0.97)	3.95 (1.18)
Rapport	5.50 (1.12)	5.28 (1.24)	5.84 (1.03)	5.50 (1.08)	3.51 (1.94)
N	120	10	17	91	2

Table D1. Effect of discussing article on money sent and trust survey responses³¹

	Mod 1: Money Sent in Game	Mod 2: Money Sent in Game	Mod 3: Trust Survey	Mod 4: Trust Survey
Intercept	1.57*** (0.33)	1.36*** (0.31)	36.71*** (1.69)	37.08** (1.60)
Discuss Article	0.66* (0.31)	0.68* (0.30)	5.00** (1.52)	5.10** (1.53)
Millennial Participant	-0.13 (0.21)		1.53 (1.06)	
Both Participants Millennials		0.43* (0.21)		1.45 (1.09)
Male	-0.31 (0.20)	-0.41* (0.20)	-0.02 (1.04)	-0.10 (1.05)
R-squared	0.07	0.08	0.06	0.06
N	100	100	204	204

³⁰ Trust and rapport scores had 0.85 correlation.

³¹ * p < .05

** p < .01

*** p < .001

Table D2. Effect of discussing article on rapport and positive affect survey responses³²

	Mod 1: Rapport	Mod 2: Rapport	Mod 3: Positive Affect	Mod 4: Positive Affect
Intercept	28.31*** (1.77)	28.22*** (1.68)	38.49*** (1.82)	38.68*** (1.73)
Discuss Article	3.87* (1.60)	3.92* (1.61)	6.18*** (1.65)	6.15*** (1.66)
Millennial Participant	0.12 (1.12)		0.28 (1.15)	
Both Participants Millennials		0.39 (1.15)		-0.01 (1.18)
Male	-1.51 (1.09)	-1.56 (1.10)	-0.71 (1.12)	-0.68 (1.13)
R-squared	0.04	0.04	0.07	0.07
N	204	204	204	204
Cronbach's alpha			0.97	0.97

³² * p < .05

** p < .01

*** p < .001

Table D3. Correlation of money sent in trust game with trust, rapport, and positive affect survey responses

	Money sent in trust game	Trust (survey)	Rapport (survey)	Positive Affect (survey)
Money sent in trust game	1.00			
Trust (survey)	0.26	1.00		
Rapport (survey)	0.24	0.64	1.00	
Positive Affect (survey)	0.15	0.67	0.74	1.00
N	100	204	204	204

Table E1. Change in money sent in rounds 1-3 for all participants³³

	Round 1 \$ sent	Round 2 \$ sent	Round 3 \$ sent	Difference between round 3 and round 1	N
Overall	2.00 (1.02)	2.15 (0.99)	2.41 (0.86)	0.41*** (0.78)	63
Text	2.00 (0.95)	2.03 (0.97)	2.41 (0.77)	0.41*** (0.73)	38
Video	2.00 (1.15)	2.34 (1.01)	2.40 (1.00)	0.40* (0.85)	25

³³ * $p < .05$

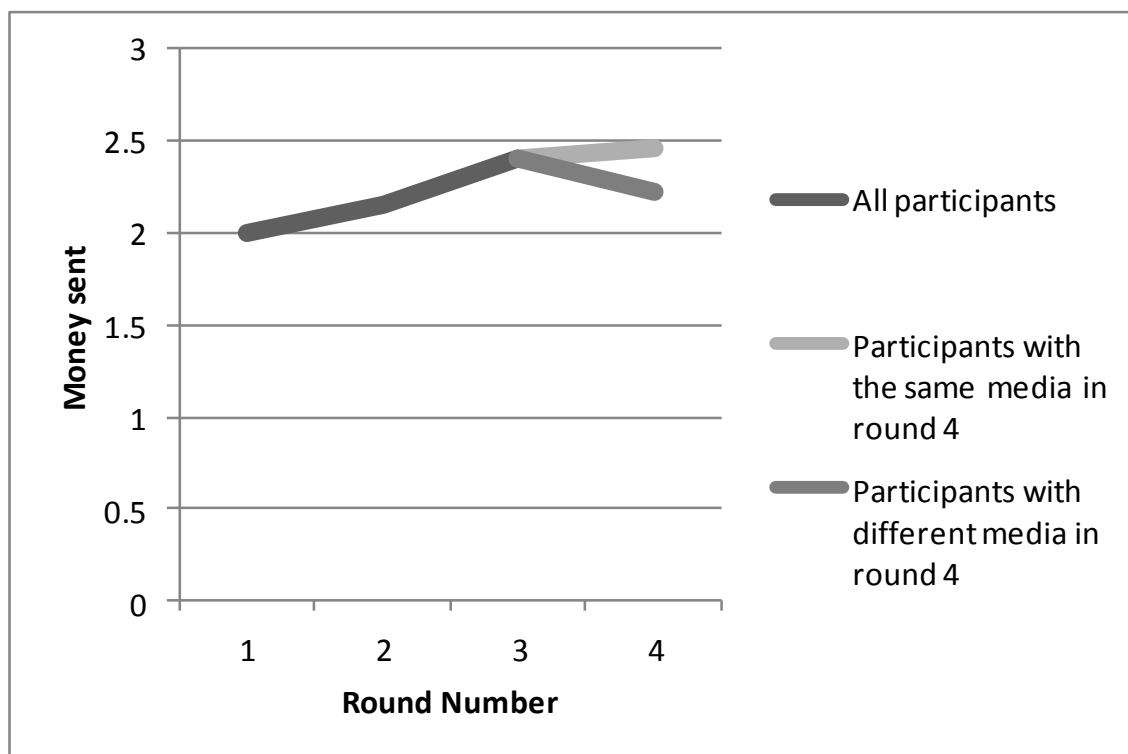
** $p < .01$

*** $p < .001$

Table E2. Change in money sent in round 4 for participants with the same and different media in the fourth round²⁸

	Round 1 \$ sent	Round 2 \$ sent	Round 3 \$ sent	Round 4 \$ sent	Difference between round 4 and round 1	N
Overall	2.00 (1.02)	2.15 (0.99)	2.41 (0.86)	2.35 (0.94)	0.35** (0.93)	63
Same 4th round	1.96 (0.97)	2.19 (0.97)	2.47 (0.86)	2.46 (0.90)	0.51** (0.99)	34
Different 4th round	2.05 (1.10)	2.10 (1.03)	2.34 (0.87)	2.22 (0.99)	0.17 (0.85)	29

Figure 2. Money sent in rounds 1-4 for participants with the same and different media in the fourth round



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WHY THE F*** DON'T THEY TRUST?

The Relationship between Online Incivility, Shouting, and Trust

“What is one of the most common complaints people have today about social media sites, forums, message boards, comment threads, etc? Can you guess? Yes, that’s right – flaming, rudeness, foul language, disrespect, lack of civility. Whether it’s simple vulgarity or a collection of hate filled speech, people see this and get turned off. It discourages people from taking part in communities and conversations.” -Alex Grossman, blogger, 2011

Grossman’s social commentary emphasizes an issue that people who conduct business online frequently experience – online incivility discourages people from cooperative participation and engaging in online communication (Pogue, 2006; Shandwick and Tate, 2012). People communicating and conducting business online need particularly high levels of trust (Herring, 2002) which they form through their digital interactions. We focus on two aspects of digital interactions – norm-violating online incivility and norm-abiding online shouting – to illustrate how the way people communicate affects their ability to build trust and cooperation. We use these examples to illustrate how moral norms such as civility (Kim and Strudler, 2012) can be used to advance a cooperative online world. We analyze what types of behaviors are considered uncivil in a digital context, particularly in online chats. Then we show that by encouraging people to abide by civility norms we can develop a more trusting online environment.

Incivility

People working online are interested in developing and maintaining trust (Mathwick, 2002). Companies need trusting relationships with suppliers, distributors, customers, and complementary businesses (Ozer, 2005). People on all sides of online dealings need to trust that the other parties are truthful and sincere in order to engage in safe, meaningful interactions (Herring, 2002). Similar to an offline relationship, for each side to show that she is likely to pull her weight, she needs a signal. The difference in online relationships is that what one person types to another is often the only information the other has about her. Therefore, in order for online parties to develop strong relationships and to show that they are trustworthy, they must give a *digital* signal indicating that they agree with certain principles and values, thereby implying that they are likely to follow the social norms of the group. One way to digitally signal this agreement is through civility.

Incivility is a display of “rudeness and disregard for others in a manner that violates norms for respect” (Pearson and Porath, 2005). Characteristics of uncivil behavior include rudeness, disregarding others, showing disrespect, being condescending or degrading, and doubting others’ judgment (Cortina, Magley, Williams and Langhout, 2001, Pearson and Porath, 2005, Phillips and Smith, 2004).

Over the last two decades, researchers wrote extensively about workplace incivility. Andersson and Pearson (1999) defined this as “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect.” Lim and Cortina (2005) clarified that workplace incivility is similar to

psychological aggression, but involves behaviors which lack clear intentionality. When discussing *online* incivility we rewrite this definition as **“low-intensity deviant behavior in violation of *online* norms for mutual respect.”**

The norms we discuss are similar to Coleman’s (1990) social norms, which “specify what actions are regarded by a set of persons as proper or correct, or improper or incorrect” (Coleman, 1990:242). In particular, we discuss the types of norms described by Donaldson and Dunfee (1999) as community-specific norms. These are norms that are consistent with the behavior and beliefs of most individuals in the group and reflect chosen values and preferences. In this context, online norms for mutual respect are online behaviors that are consistent with the mutual respect upheld by, and believed to be important by, most individuals in the online community. This definition excludes from “incivility” behaviors which do not violate online norms, such as online shouting. (This will be discussed further below.)

As with other areas of business ethics, there are two approaches to studying incivility: Normative methods describe how things should be, (e.g. people should not lie,) while empirical methods describe how things are (e.g. most people lie once a day). The comprehensive study of business ethics requires utilization of both empirical and normative perspectives (Robertson, 1993; Donaldson, 1994). In this paper we combine these two methods with a “symbiotic” approach, where the theoretical cores of normative ethics and behavioral research remain separate, but in which the normative goals guide the focus of the empirical studies (Weaver and Trevino, 1994).

The purpose of this approach is to use normative imperatives to direct empirical discussion (Robertson, 1993). In order to understand why uncivil behavior is unethical,

we explain what effects this behavior has. While causal accounts cannot replace moral justification, we can expect to “learn from experiments in living” (Appiah, 2008). In particular, we use the empirical findings of the effects of incivility to help describe why they are normatively wrong; incivility is wrong (in part) because it leads to negative social consequences, particularly to lower levels of trust and cooperation.

Moral Wrong of Incivility

Recently researchers developed moral arguments against incivility from various normative perspectives (Kim and Strudler, 2012; Stohr, 2012) which we can apply to a digital context. The arguments commonly maintain that civility is a serious ethical endeavor and no less a moral imperative than any other lofty moral enterprise in business. In this section our intention is to show that online incivility is ethically wrong, rather than to judge among these perspectives.

Kantian ethics may address the wrong of incivility. One's uncivil attitude does not adequately respect others, and 'respect' is a core idea in Kantian moral theory (Wood, 1999; Hill, 2000). Kant himself acknowledges the importance of civility (Frierson, 2005). For the Kantian one's actions should reflect respect for reasonable choice through an exchange of reasons or co-deliberation, a process of reasoning together with a person to identify mutually acceptable ends (Korsgaard, 1996; 2009). It is wrong to exclude a person from reasoning about some matter that involves her. This wrong of exclusion, of failing to engage in an exchange of reasons, may explain the wrong in incivility.

One might suggest that agent-centered virtue ethics can provide us with more holistic views about the disvalue of incivility. Civility is not clearly included in Aristotle's list of the virtues, although there is a brief reference to it in Book IV, Chapter VI of *Nicomachean Ethics*, in the context of his discussion of friendliness in intimate relationships. However, one might suggest that Aristotle's "civic (or political) friendship" may be a fit virtue for discussing the value of civility (Kekes, 1989). Civic friendship is an attitude based on the recognition that by wishing and doing well towards other

members of society, the fabric of society is enhanced and maintained (Cooper, 1977, Schwarzenbach, 2009).

The virtue of civic friendship requires one to treat other members of society in publicly expected ways, in accordance with public norms. Hence an agent who exercises the virtue of civic friendship would not characteristically act in violation of such public norms. The uncivil person does not act in accordance with the required norm. Therefore the virtue ethicist may maintain that he acted wrongfully.

Additionally, we need to emphasize Asians' insightful attitude to the value of civility (Adams, 1995, Kim and Strudler, 2012). Kim and Strudler (2012) showed that the practice of workplace civility is morally essential to the decent workplace. According to Herbert Fingarette's interpretation of Confucian ethics, part of respecting a person is to value her as sacred. Sacredness emerges from participation in rituals which form the normative basis for well-mannered behavior and its expressed quality (Fingarette, 1972, 1983, and 2008). Rituals by their nature are conventional, in much the same way that language is conventional; both ritual and language derive their significance from a shared understanding and purpose of people who use them. Confucius maintains that excellent human relations are constituted by proper rituals, and humans become excellent by the sacred that emerges from their participation in proper rituals. One who gratuitously ignores proper rituals fails to act consistently with the important moral value of the sacred. Therefore, the distinctive wrong in incivility, from a Confucian perspective, is profanity, mistreating someone to whom sacred treatment is due (Kim and Strudler, 2012). Hence from the Confucian perspective, incivility is a 'moral horror' (Adams, 1995).

These Kantian, virtue ethics, and Confucian arguments can be applied to online incivility. Much like workplace incivility, online incivility excludes others, violates civic friendship duties, and disregards important rituals. While these arguments apply in an online context, the social contract approach allows us to take a specifically digital view of incivility.

Social Contract Theory

The moral requirement to act civilly online may derive from a hypothetical social contract, such as the Integrative Social Contract Theory (ISCT) described by Donaldson and Dunfee (1994, 1999). Like other social contracts, ISCT derives its authority from the assumption that people acting rationally would hypothetically consent to the terms of the contract affecting the community of which they are a member.

In developing a social contract which could be accepted by global business people, Donaldson and Dunfee divide the obligations which stem from social contracts into two categories: hypernorms, such as human rights, are supported by the international community and are consistent with precepts of major philosophies and with universal human values. Community-specific norms are consistent with the behavior and beliefs of most individuals in any specific group and reflect chosen values and preferences. In Donaldson and Dunfee's framework, hypernorms create moral obligations for everyone, while community-specific norms only create obligations for the communities which adapt them.

Previously (in section 1 of this dissertation) we applied Donaldson and Dunfee's (1994; 1999) social contract theory to people who conduct business online, showing that

people form online communities. In that paper we showed that norms related to trust-building and cooperation fall into the category of morally obligatory norms. The question that remains is which online behaviors are norms that build trust and cooperation. These behaviors become candidates for community-specific norms for online communities, containing moral obligations for online users.

Since we are particularly discussing online incivility, we do not need to show that incivility violates a hypernorm; it is sufficient to show that incivility violates a community-specific norm for the online community. To this end, we can discuss online communities and the norms they develop. We cannot necessarily lump the entire world of Internet users into one category when it comes to all social or moral norms. However there are certain norms which arose over the last two decades of Internet use, and which developed into community-specific norms among English-typing users of frequented websites and social media. In this paper we will show that there are community-specific online norms related to incivility which although not all Internet users abide by them, are consistent with the *belief* and behavior of most individuals in the group, and are thus binding as community-specific norms.

Practical Costs

Contemporary business leaders may be more concerned with the outcomes of their employees' behavior as a result of online incivility than with the deontological issues mentioned above. The study of workplace incivility relies largely on the work of Andersson and Pearson (1999) who define workplace incivility as "low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual

respect” and suggest that it can create significant costs. They found that workplace incivility can instigate a series of negative events across an organization, which can lead to coercive and violent behavior. Workplace incivility is associated with negative affect, and triggers negatively-associated bodily reactions such as changes in heart rate, blood flow, and gastrointestinal activity (Porath and Erez, 2009). Researchers show how merely witnessing rudeness decreases citizenship behaviors, reduces performance (Porath and Erez, 2009) and inspires anger and fear in onlookers (Phillips and Smith, 2004).

Another study reports that workers experiencing incivility have significantly lower supervisor satisfaction, co-worker satisfaction, work satisfaction, mental health, and physical health (Lim, Cortina, and Magley, 2008). Incivility significantly reduces workers’ helpfulness, objective cognitive functioning, creativity, and flexibility (Porath and Erez, 2009). Most empirical research done in this area uses field studies to understand workplace incivility. These studies show workplace incivility as an instigator for psychological distress, job dissatisfaction, job withdrawal, and counterproductive work behavior (Cortina et al., 2001, Lim and Cortina, 2005, Penney and Spector, 2005). Workplace incivility also depletes organizational resources and causes people (whether targets of incivility or witnesses to it) to have a decreased sense of organizational values (Pearson and Porath, 2005). Overall, researchers find that workplace incivility can cause significant damage to relationships and productivity. In this paper we explore whether online incivility has similar effects. In particular, we discuss the interpersonal effects of incivility: how one person’s incivility affects another’s behavior (Morris & Keltner, 2000).

Theory Development

Online Incivility

While there is significant research on the effects of workplace incivility, there is little empirical work looking at incivility outside of the traditional workplace (Caza and Cortina, 2007). As the modern workplace moves online, the concept of workplace incivility will become intertwined with online incivility. Shandwick and Tate's 2013 survey shows that 48% of Americans defriended, hid or blocked someone online³⁴ because their comments or behaviors were uncivil. We should expect that while employees, managers, customers and dealers increasingly engage in online conversations, the effects of incivility in these discussions will become particularly important. Pearson and Porath (2005) write, "Some organizational scientists consider the prevalence and costs of workplace deviance among the most serious dilemmas facing organizations today." Companies and groups which utilize web-based interactions should be equally concerned with online incivility as a threat to the well-being of their organizations.

Online social environments differ from offline communities (Ozer, 2005) and therefore tend to have different social patterns. Back in the days of modems and dial-up, Herring (1996) published a collection of papers about text-based computer-mediated communication, which discusses the "language, culture and social interaction" which distinguishes this form of communication from traditional speech. Since then a culture of

³⁴ Defriending someone on social media is to remove her from a list of friends. Blocking someone is a way to prevent someone from accessing the blocker's posts, and hiding prevents someone else's posts from appearing on the hider's social media.

online interaction has developed, taking these computer-based features and creating a new online society.

Alavi, Ahuja and Medury (2011) discuss some of the unique features of online communities, describing how people discover that they are similar to each other (by describing their similar problems, requirements, opinions or experiences,) which encourage more empathy and trust than in offline communities where these similarities may take longer to become obvious. For example, on the social news site Reddit, in a group about food, people can quickly learn that many people enjoy baking cupcakes, but have trouble making lemon meringue pies. If the reader shares those feelings, he may easily feel close to the other people who posted. In face-to-face conversations, it can take significantly longer to uncover similarities between people, and therefore it may take longer for people to develop those types of communal bonds.

Hemetsberger (2001) analyzed another unique aspect of online behavior, showing that the reasons people contribute to online communities are different from the reasons people contribute offline. She found that online communities reward cooperation differently – with stronger reputation feedback from peers – which encourages greater online communal contributions.

Because of significant differences between online and face-to-face norms, behavioral researchers cannot simply take social theories regarding offline interactions and apply them to online interactions. Kollock (1996) discusses whether we can apply Axelrod's (1984) and Ostrom's (1989) behavioral decision making research to online interactions and communities. He concludes that it cannot be cut and paste in a simple

manner. There are different features, constraints and challenges to deal with when applying these theories to online interactions.

The challenge we approach in this paper is how to take the findings of workplace incivility and apply them in the social context of online incivility. Above we defined online incivility as “**low-intensity deviant behavior in violation of online norms for mutual respect.**” So what are these online norms for mutual respect? Online communities develop their own norms and structures, which don’t just imitate offline life (Smith and Kollock, 1999). We need to understand what these norms are to understand when they are violated.

Online Norms

The purpose of online norms is fundamentally similar to offline norms (Yee, Bailenson, Urbanek, Chang & Merget, 2007) as both define “conventional social behavior” (Lefkowitz, 2006). Researchers examining online norms demonstrate that these norms are necessary for participation in online communities (Wang and Chen, 2012) and for people to feel communal obligations online (Mathwick, 2002) just as offline norms are necessary for participation and communal obligations in offline communities (Putnam, 1993).

However the instantiation of these norms may differ online and in person. Standard behavior on the web might include more conventionally rude remarks, and at the same time may not tolerate behavior considered normal in offline work experiences. For example, in face-to-face conversations, long pauses in conversation, or taking a break

after a question is asked is considered awkward (McLaughlin & Cody, 1982), while such habits are the norm in many online chat conversations (Berglund, 2009).

One example of where people developed online-specific norms for communication is in the language they use. Even as early as 1996, researchers discussed “A new variety of English” that is used online (Milena and Belmore, 1996). Since then this language has developed significantly into “netspeak,” as *ttyl* replaces “talk to you later,” and *brb* replaces “be right back” in most online chats (Netspeak). These are only two examples of the norms of language and speech which have become standard in online communication.

There are also many other online norms developed by participants in online communities, such as norms of reciprocity (Mathwick, 2002), self-disclosure (Barak and Gluck-Ofri, 2007) and displaying emotions (Glikson and Erez, 2013). We expect that similar to these other norms, online-specific norms for civility have developed as well. Some evidence for this exists in the rules posted by online groups reflecting their chosen values and preferences. Most of these lists include (and prioritize) acting civilly. For example Reddit, a social news website, has “Reddiquette – an informal expression of the values of many redditors [Reddit users,] as written by redditors themselves.” Reddiquette tells members, among other requests: “Please don’t be rude” (Reddiquette). “Principles of Wikipedia Etiquette” advises contributors to the free online encyclopedia to recognize when they are wrong and apologize, and to give credit where it is due (Wikipedia). Social networking site Facebook’s list of “Community Standards” says they will take action against users who bully others using their site (Facebook, 2012). What these lists

indicate is that members of these forums consider certain types of incivility to violate communal norms in online media.

Online civility norms may be different than norms in face-to-face communication, even when both involve talking to customers, employees, and managers. Since the norms differ, the definition of what is considered uncivil differs as well. Online conversations often have a more casual tone (Tat and Carpendale, 2006) however certain norms of civility still exist. To explain online norms of civility, we need to understand “conventional social behavior” for online interactions. We particularly look at online chats to see what norms exist for these interactions.

In this paper we also seek to limit the scope of online norms; our definition of online civility norms does not include online shouting, since it does not necessarily violate civility norms and may be an acceptable style of expression.

Trust and Cooperation

Our goal in understanding online norms is primarily to understand what happens when those norms are violated. As we saw from the work of Porath and Erez (2009,) Cortina and colleagues (2001; 2008,) and others, violation of offline norms of civility decreases citizenship behavior and appreciation for organizational values. The question we approach in this paper is whether violation of online norms of civility has similar effects – particularly when it comes to cooperative citizenship behavior and the value of trust.

There are a number of ways to define trust. When we consider trust as “willingness to accept vulnerability based upon positive expectations about another’s

behavior,” (Rousseau, Sitkin, Burt, & Camerer, 1998) we can begin to conceive of a willingness to trust strangers which brings many benefits to societies (Bahry, Kosolapov, Kozyreva & Wilson, 2005). This trust takes its form in a belief that others will not act with intentional acts of deceit (Schweitzer, Hershey & Bradlow, 2006).

Trust is a critical factor in cooperative relationships. As discussed in greater length in the first section of this dissertation, cooperation that involves risk arising from cooperation failures requires trust. In order to have successful cooperation, parties need a mutually rewarding exchange relationship (Morgan and Hunt, 1994). This exchange is not just an equal exchange of goods; the basis for exchange can include principles and values (Kabanoff, 1991). This is part of the social approval process, which plays a large role in online cooperation (Hemetsberger, 2001). In order to gain this social approval, an online participant must show that she is concerned for the social norms of the group.

Cortina (2008) found that workplace incivility inhibits cooperation and endangers relationships. A person who is rude, vulgar, and boorish is less likely to be perceived as trustworthy by others than one who is kind, nice, and decent (Gill and Sypher, 2009). Because of the importance of trust and cooperation to the online community (Mathwick, 2002), we explore whether these studies regarding workplace incivility and cooperation-building apply to online incivility. In other words, we look at whether online incivility damages online trust and cooperation.

Hypotheses Development

Online Cooperation

In online social interactions, contributing to an online group's benefit may pose a risk to a person's individual benefit. The less likely the other participants are to cooperate, the greater the risk to the individual cooperator. Therefore when a person suspects that others in her group are untrustworthy and unlikely to cooperate, she will be less willing to contribute to the group's benefit, especially if it is a risk to her own benefit. People who are uncivil online show that they are less trustworthy and less likely to cooperate, causing others to fear that their cooperation will not be reciprocated and to not cooperate themselves.

Hypothesis 1. Incivility leads to lack of cooperation.

Online Trust

In many aspects of life, particularly digital life (Ozer, 2005), cooperation involves a risk that other people may not cooperate. If people do not trust that the other parties will contribute to the overall benefit, the individuals will not risk cooperating. In these scenarios, which are very common when people work together online (Mathwick, 2002; Ozer, 2005), trust is required to promote cooperation.

As discussed earlier, online and offline relationships differ in that what one person types to another is often the only information the other has about her. Therefore, parties interested in a trusting online relationship need to give a digital signal indicating

that they agree with certain principles and values; with this signal they show that they are likely to follow the social norms of the group.

Researchers show that displays of emotion can act as a signal about a person's beliefs and intentions. For example, Van Kleef, De Dreu & Manstead (2004) describe "tracking behavior," in which individuals use their opponents' expressed emotions to locate their limits in negotiations. Incivility is not an emotion, but it can similarly signify beliefs and intentions. Civility is a demonstration of respect, signaling an agreement with principles and values. Incivility, on the other hand, demonstrates disregard for others in a violation of norms for respect (Pearson and Porath 2005). Violating online norms for respect by acting (or typing) uncivilly demonstrates disregard for others and signals that the violator does not agree with the principles and values of the other.

In order to trust others, people must believe that the trustee is going to follow group norms and do what the group expects of her. Displaying online incivility is a negative signal, indicating that a person does not follow online norms and is less likely to act in a socially accepted way. Therefore the uncivil online actor indicates that she can't be trusted to fulfill her online social obligations.

Hypothesis 2. Incivility leads to lack of trust.

Online Rapport

Similarly, uncivil language online acts as a signal that a person is less likely to pull her weight in the relationship. This fractures their "mutual positivity and interest," defined as rapport (Nadler, 2003). Rapport is critical to successful negotiations and is

linked to lower incidence of impasse and to higher satisfaction in negotiation results (Jap, Robertson and Hamilton, 2011; Nadler, 2003).

A critical aspect of rapport is that the parties are well coordinated and that each can predict the other's response (Tickle-Degnen and Rosenthal, 1990). But when one party writes in violation of online norms she indicates that her responses are not easily predictable. When a person feels that she has stronger relationships with the other group members and has confidence in the other members' future actions, she will be more likely to come to mutually beneficial agreements with other members of the group. However when a person writes uncivilly, she indicates that she is not interested in a strong working relationship and that she is unlikely to fulfill her obligations to sustain such a relationship.

Hypothesis 3. Incivility leads to lower rapport.

The trust we discussed in this paper is based on a belief in the other person's likelihood of acting in your favor. When people do not have a strong relationship they will be perceived as less likely to act favorably towards each other, especially if it means sacrificing for the other. Therefore, we expect that people who experience online incivility will experience lower rapport with the uncivil person, and because of that will also trust the uncivil person less.

Online Shouting

Our explanation of the effects of incivility relies on the premise that incivility is a signal to the group that a person is not following social norms and is detached from the group. This detachment leads to suspicion about a person's future behavior, and therefore lowers the perceived trust, rapport and cooperation which the individual receives. However, certain behaviors exist which although seemingly "uncivil" in colloquial terms, are not in violation of online norms. We should expect then that this behavior does not impact trust, cooperation and rapport the way norm-violating behavior does.

One example of seemingly uncivil behavior which may not violate online norms is shouting. Shouting can be expressed digitally through the use of capital letters other than at the beginning of a sentence or for proper nouns, which we will call CAPS in the rest of the paper.³⁵

Shouting is often considered uncivil in face-to-face communication (Philips and Smith, 2004,) but shouting online through the use of CAPS may be a common and accepted form of voice in digital communication (Glikson and Erez, 2013). Therefore online shouting would not be in violation of online norms.

There are many reasons why CAPS may be used in online conversations. Some people use it by accident, while others use it to express tone, excitement, emphasis, or anger. Often CAPS is used as the equivalent of showing strong emotions in a face-to-

³⁵ Illustrating this, one video entitled *Accidentally hitting "Caps Lock" in Real Life*, depicts a person randomly shouting in the middle of a sentence (Horseless Productions, 2012).

face conversation, essentially replacing emotional facial cues (Byron, 2008; Glikson and Erez, 2013). Even in the same digital conversation people may use CAPS differently. For example, in an online discussion of a rainbow cake recipe (Burneko, 2014), some people commented:

Irene: How long do you freeze the numbers?

peb: till they are FROZEN

[berating of question asker and responder]...

Seriously: oh good GOD, it is a cake recipe site...

sparkysmom: Well, I WOULD JUST LIKE TO LET YOU KNOW, THAT

I HAVE BEEN DOING CAKES SINCE BACK IN THE 70'S... [22

lines later, all of which in CAPS] –BLESSINGS TO ALL-NANCY

[discussion of whether liberal politics means people should be allowed to say what they want]...

Jim in Hayward: YOU are the dummy stupid bitch! Liberal... meaning

Free, as in FREE TO SPEAK YOUR MIND... such a stooooopid

bitch!

Denise: Good grief it's a cake recipe... No wonder we (America) can't get anywhere or get along!!!! ITS A CAKE!!!!

In this one conversation thread, shouting is used to indicate anger, emphasis, and (it seems for “sparkysmom,”) accidentally leaving the Caps Lock on. There are many reasons why CAPS may be used, many of which are norm-abiding. Although online yelling may be considered uncouth, it is not necessarily norm-violating online behavior.

Previous research on shouting and other expressions of anger in negotiation settings are inconsistent (Allred, Mallozzi, Matsui, & Raia, 1997; de Melo, Carnevale, & Gratch, 2011; Friedman, Anderson, Brett, Olekalns, Goates & Lisco, 2004; Sinaceur & Tiedens, 2004; Van Kleef & Côté, 2007). In some studies, angry expressions trigger angry responses and lower resolution rates, and sometimes they don't. Some researchers look for distinctions between the two responses to anger, finding results relating to power disparity (Van Kleef & Côté, 2007), availability of alternatives (Sinaceur & Tiedens, 2004), vulnerability (Friedman, et al., 2004), and whether participants knowingly negotiated with a computer (de Melo et al., 2011). However these papers discuss the effects of anger on the angry opponent's conceding, competing, or demanding, and not on whether they will trust or cooperate differently. Friedman et al. (2004) get the closest to discussing cooperation, as they research anger expressions in mediation, however their dispute resolution setting also differs from the trust-building negotiation setting discussed in this paper. Furthermore, most of these papers analyze anger that is directed at offers, not anger directed at the opponents themselves (de Melo et al, 2011; Steinel, Van Kleef & Harinck, 2008). Therefore we can conclude that there is no conclusion; no theory clearly shows that anger will affect trust-building in situations where the individuals have other alternatives and similar power, such as is the case in most anonymous online chats.

Prior research supports the claim that shouting and expressing anger in general do not violate norms (Litvak, Lerner, Tiedens, & Shonk, 2010); they are frequently experienced in negotiation settings (Allred, et al., 1997) and are commonplace in online and offline interactions (Allred, et al., 1997; Averill, 1983). Therefore we expect that online shouting does not violate online norms. This claim is further supported by

research conducted by Van Kleef and Côté (2007). They looked at computer-mediated negotiation simulations and saw that anger at times increased cooperation and at times decreased cooperation, depending on the disparity in power between the parties and on whether the anger expressed violated a specified rule. Some participants received an explanation that the ethics committee had established a strict rule which stated that participants were not allowed to express negative emotions during the negotiation. In their research, only participants who are told about this rule demand more in the negotiation. When participants negotiate with an angry opponent who has not violated a stated rule, they react in similar ways as when they negotiate with a non-angry opponent (Van Kleef and Côté, 2007, figures 2 & 3). In other words, expressing anger without a specified rule saying that anger is wrong in this scenario does not affect negotiation outcomes. This result is easily explained by the theory that anger is expected in computer-mediated negotiations; participants who are explicitly told that there is a rule against expressing anger see this as a violation, but those who are not do not see angry behavior as violating any unspoken norms.

There is no theory which demonstrates that negatively-toned shouting in anonymous online chats would affect levels of trust and cooperation, and furthermore, using CAPS to express positive emotions can be helpful in building trust (Glikson and Erez, 2013). Given these factors, and the theory that incivility violates online norms (causing less trust and cooperation) while shouting does not, we expect that:

Hypothesis 4. Online incivility leads to a greater lack of trust and less cooperation than do shouting expressions online without incivility.

Empirical Studies

We used a number of different approaches to establish norms of online civility and what constitutes violation of those norms. First we analyzed text messages sent in a prisoner's dilemma-like cooperation game. Then we used computer-generated civil and uncivil comments to show the effects of online incivility. We then collected and tested a broader range of examples of online incivility and anger. Using these definitions we conducted two additional studies to understand what happens when people act with online incivility and CAPS.

We test our hypotheses with lab-like manipulations and field-like quasi experiments. None of the studies take place in the actual lab or a traditional experimental field, since they were all conducted online.

Study 1

In study 1 we analyze data from a prisoners' dilemma-like game to look at the effects of online incivility in a cooperative negotiation setting.

Method

Participants. Undergraduate and MBA students at a U.S. business school played this game for credit in a negotiations class. For this study we looked at 509 games, involving 1,527 teams and approximately 4,500 students between 2003 and 2010. In approximately 95% of the classes, students are graded on the outcome of the results.

Professors and students from the graded and ungraded classes say anecdotally that students take the game seriously.

Procedure. The game is a simulation of OPEC decision making designed by Maurice Schweitzer and run by the Wharton Learning Lab (Schweitzer, University of Pennsylvania). Each game setting, or “world,” consists of 3 “countries.” Countries usually have 2-4 members. Each country sits in a different room with a computer screen. Each country simultaneously decides how much oil to produce for that round. Participants are then told the results of the round, and play another round. All countries are given the same profit function, which depends on the quantity which that individual country produced and the price per barrel.³⁶ Marginal cost is constant. The price is decided based on total production of the world (the more produced, the lower the price). The goal for each country is to maximize profit. (See Appendix E for full instructions.)

The number of rounds (between eight and twenty-five) and simulation events are decided by the professor prior to the game. These details are not given to the students before the game. They do not know how many rounds of the game will be played. They do know how much time is allotted for the game, and the final round is announced before their final round decisions. During each round the students see a screen summarizing the world’s activities in prior rounds. After they play the game, the students analyze the results together with the professor and the rest of the class.

³⁶ Students are provided the formula $\text{Profit} = Q_i(P - C)$ where Q_i = country’s output, P = price, and C = marginal cost.

The OPEC simulation presents a prisoner's dilemma for the countries involved.

One equilibrium outcome is for each country to defect (produce at a high level). By increasing production, each country increases its own profit, regardless of the production levels of the other countries (assuming price is greater than marginal cost). However a long-term strategy is likely to incorporate the attempt to encourage other countries to produce low amounts in future rounds, to keep the world price high. Since the students do not know how many rounds there are, different strategies may arise (e.g. tit-for-tat) for playing the iterated prisoner's dilemma. However, from a theoretical perspective, there is no one "best strategy" in this type of game (Axelrod, 1984).

In addition to short-term outcomes of the simulation, students playing this game are concerned about their reputations. In future classes they are likely to be paired with their teammates or counterparts from this game. In many classes they will have to explain their behavior in the class discussion or informal discussions following the game. In some classes students grade each other at the end of the semester on preparation and skills. Most importantly, these students often have (or want) long-term relationships with their counterparts, in and out of class. The variation in the strength and length of the long-term relationships in this game provides a realistic basis for studying the effects of incivility in online communication.

Measures

Cooperation. The profit-maximizing production for each world is 38 barrels per country per round. If all three countries in a world produce at this level, the resulting

price is \$35.80 per barrel. Transcripts of messages sent between countries as well as discussions with the students indicate that the students immediately recognize 38 as the cooperative production level.

We measure cooperative behavior using production per world in each round. The more cooperative the countries are, the closer each country's production will be to 38 million barrels.³⁷ When countries defect, they produce more barrels for higher individual country profitability, at the expense of world profitability. We measure higher cooperation as lower production.

The price of a barrel is determined by the number of barrels all three countries in a world produce in a given round. Thus people in a cooperating world will have higher prices and therefore higher profitability over the course of the game. In this game, we use cumulative profitability as a way of measuring medium-term cooperation among world members.

Incivility. Simulation events are decided by the class' professor before the game. These include whether at a pre-determined point in the game, countries may send one-line messages to other countries in their world. Two research assistants coded these messages for incivility, and were told to specifically look for what Pearson and Porath

³⁷ In some games a fourth computer-generated country is added to the world, which produces a random small number of barrels. This addition affects ideal production slightly. In 99% of the games we studied, participants produce at or above ideal production.

(2009) describe as workplace incivility: Demeaning or derogatory remarks, taking credit, passing blame, talking down, speaking poorly about others, belittling other's efforts, shutting one group out of the team, showing little interest in other's opinions, acting irritated, or cursing. For example, one team, irritated with Capita's performance, wrote, "Again, we will be better off if we cooperate. We are glancing at you, Capita. [One of our teammates] knows who you are and will hunt you down and punch you if you go above." Another team wrote, "knock it off, C [Capita] Don't be a jackass."

The research assistants were only shown the individual messages, and were not shown messages from the same country at the same time. They were blind to the production, price, and profits of countries and worlds. The two research assistants had .66 correlation on the incivility coding. For the purposes of this study, only the messages which both researchers coded as uncivil were measured as uncivil.

We also asked the research assistants to code the messages for whether the participants expressed anger. Here too we used the messages which both assistants coded as angry.

Results

First we looked at the difference in production between groups which receive uncivil messages and those which do not. In the round following a message, mean production for the teams receiving uncivil messages was 52.98 million barrels ($N = 818$, $SD = 0.54$). In contrast, production in rounds following receipt of messages which were

not uncivil was 46.94 ($N = 4161$ $SD = 0.22$). This is a difference of 6.03, indicating a 12% increase ($p < 0.001$) for countries which received uncivil messages.

Production in an individual round is heavily affected by the number of rounds already played (identified by the round number). Additionally, the production of countries in each round is highly determined by the anchor of the price in the first round. We include both of these factors in an ordinary least squares regression of production in rounds with messages. This also shows that recipients of uncivil messages have on average significantly higher production following that round ($p < 0.001$). What we see in this study is that there is lower cooperation from recipients of incivility in digital communication, using definitions of incivility taken from workplace incivility (Hypothesis 1).

We also compared teams' receipt of uncivil messages to receipt of angry messages.³⁸ In an ordinary least squares regression, we found that while both types of negatively-toned messages are likely to result in an increase in production (a decrease in cooperation,) uncivil messages had significantly more of an impact than angry messages. We assumed that displaying anger in this context does not violate norms. In fact, many of the students feel that anger is justified and expected in certain negotiations. Therefore displaying anger in this game did not affect cooperation as strongly as incivility (Hypothesis 4).

³⁸ 450 teams received uncivil messages during the game; 49 teams received angry messages.

Table F1. Effect of incivility and anger on production following the message

We also ran a difference in differences test to look at how the message round affected a team's performance. For countries which received uncivil messages, the mean production in rounds after messages was 52.98 (N=818, SD = 0.54) and the mean production for all other rounds was 54.32 (N = 4153, SD = 0.24). For these teams, production decreased slightly after message rounds. For countries which did not receive uncivil messages, mean production after messages decreased more substantially, from 49.48 (N=11,348, SD = 0.14) to 46.94 (N = 4161, SD = 0.22). Regardless of the incivility in the messages, sending a message at all encouraged lower production (greater cooperation). However when messages were uncivil they were less effective at promoting cooperation than when they were civil (Hypothesis 1).

To measure medium-term cooperation as a result of incivility, we tested the cumulative profitability of countries which did and did not receive uncivil messages. Countries which received uncivil messages had on average \$12,205.56 total profit from the whole game (N=450, SD = 179.76). Countries which did not receive uncivil messages had on average \$13,522.11 total profit (N=1077, SD=125.87). An ordinary least squares regression of total game profitability which controls for the number of rounds in the game showed that countries which received uncivil messages had significantly lower total profits from the game ($p < 0.001$) (Hypothesis 1).

Table F2. Effects of receiving uncivil messages on total game profitability

We also measured total game profitability of countries which themselves were uncivil (N=272). This averaged \$11,857.47, approximately \$1,500 less than countries which were not uncivil. An ordinary least squares regression shows that even when controlling for the number of rounds and the first round price, uncivil teams fare significantly worse over the course of the game ($p < 0.001$). Here we see that incivility in this context discourages cooperation from the receivers of incivility and harms the profits of the uncivil actors.

Table F3. Effects of sending uncivil messages on total game profitability

Discussion

The prisoner's dilemma game we analyzed in Study 1 requires significant trust among participants that the other countries in their worlds will not defect and over-produce. This trust creates cooperation which in turn brings higher profitability. We found that participants who received uncivil online messages cooperated less than those who received other messages, both in the short-term (in the round following the uncivil message) and in the medium-term (throughout the entire game). Showing anger in these discussions did not significantly affect cooperation. However unlike anger, incivility lowered levels of cooperation. We assume that lower cooperation indicates a lack of trust of the uncivil teams and examine this aspect of online relationships further in the next study.

Additionally we found in Study 1 that incivility in cooperative negotiations does not pay for either the uncivil party or the recipient of incivility. Cooperation and

profitability for both of these groups was lower than for those who were neither uncivil nor saw uncivil messages.

Study 2

The purpose of Study 2 is to explore whether people who experience incivility view uncivil people as less trustworthy. We also used this study to test whether incivility affects participants' perceptions of rapport.

Method

Participants. Two-hundred and fifty Mechanical Turk online survey participants were recruited to play an online quiz game in exchange for a small reward.

Procedure. Participants were randomly assigned to *uncivil*, *civil1*, *civil2*, or *no response* teammates. After consenting to the study, but before playing the game, participants were told they would work together with another online participant to answer trivia questions. Participants were required to wait 10 seconds for their partners to join.

Participants then interacted with a computerized "confederate." They were told that they have an opportunity to introduce themselves to their teammates by writing a short message. They then waited 3 seconds, following which they saw a message from the computerized confederate. Participants then answered three trivia questions and were told what the correct answers were and the total number of questions they and their teammate answered correctly. Then participants had a second opportunity to interact with their teammates, in the same fashion as before.

In the second part of the study, the participants were led to believe they were playing a game with the same teammate (modeled after the investment game by Berg, Dickhaut and McCabe (1995)):

You will play the next game with the same teammate. In addition to your participation fee, you will receive \$3. (Your teammate doesn't receive this additional money but will be told that you are receiving it.)

*You decide how much of this \$3 to send to your teammate. Your teammate will receive **triple** the amount that you send. Then your teammate will decide how much of the tripled money to send back to you.*

For example, if you send \$5, your teammate will receive \$15 and will decide whether to give you any amount between zero and \$15.

Your total earnings will be the sum of the money you keep now and the money your teammate returns to you.

Participants were then given an example and test questions to ensure they understood the game. Participants who answered these questions correctly then made offers to their teammates. All participants answered survey questions about incivility, rapport and trust after they made an offer but before they received the confederate's response to the game.

At the end of the questions, people answered whether they thought they were playing with a real person. Those who responded no (51%) were excluded from the

analysis. 113 participants were included in the final analysis (53% male, average age 34, all living in the United States) of whom 78 (58% male, average age 34,) played the trust game.

Uncivil Manipulation. For this study we solicited uncivil lines from colleagues, rejected the high-intensity comments, and pre-tested the manipulations to determine validity of the uncivil and civil teammate interactions. In the pre-test we combined the remarks in different combinations and asked participants to rate incivility. We chose the uncivil combinations which had the strongest incivility while still being reasonably believable in this context.

In the first uncivil condition, participants saw their teammates write, “I don’t have time for this. can we get it over quickly?” (Sic) and then “I did a fucking good job” In the second uncivil condition, participants saw “Mark” and then “go ahead and make pathetic excuses you want” (Sic). In the civil condition, participants saw “Hi, I’m Mark. I’m looking forward to working on this with you” and then “I’m happy with this outcome, I hope you are too....” In the no response condition, participants saw “<no message>” during both interactions.

Measures

Online Trust and Belief in Reciprocity. The trust game in this study is modeled after the investment game designed by Berg, Dickhaut and McCabe (1995). This game was designed to test the extent to which self-interested rational thought guides human

behavior and where trust plays an important role. The prediction based on the unique sub-game perfect Nash equilibrium is that the participants would not send any money. However what Berg et al. (1995) found was that 55 out of 60 times they did send money. The authors explain that, “Subjects were willing to place a trust, by risking some amount of money, in the belief that there would be reciprocity.”

In our study we measure trust using a continuous variable of how much money the participants send. We compare the amounts sent by participants in civil, uncivil, and no response conditions. We also test the assumption made by Berg et al. (1995) that willingness to risk is based on a belief in reciprocity by explicitly asking participants how much money they expect to receive in return. To verify the internal reliability of the trust game, we ask participants a series of questions regarding the trustworthiness of their teammates, based on Johnson-George and Swap (1982) and Dunn and Schweitzer (2005). (See Appendix A.) Participants were also asked questions about their teammate’s competence and warmth (also termed “positive affect”) adapted from Fiske, Cuddy, Glick, and Xu (2002). (See Appendix C.)

Online Incivility. To test whether incivility similar to workplace incivility exists online, and to test the effectiveness of the incivility manipulation, we asked participants about the level of incivility of their teammate, using questions based on Cortina, Magley, Williams & Langhout’s (2001) discussion of workplace incivility. (See Appendix E.)

Online Rapport. Our hypothesis is that incivility affects the possibility of relationship-building which in turn inhibits cooperation. To help us understand this mechanism, participants answered questions about rapport with their teammate, adapted from Jap, Robertson and Hamilton (2011). (See Appendix B.)

Results and Discussion

Incivility. Results show that participants who received any type of uncivil message (cursing, “pathetic excuses,” and no response,) considered their teammates uncivil according to Cortina et al.’s standards of workplace incivility.

Table G1. OLS of survey responses following uncivil and civil messages

Trust. Both surveyed trust measures and results from the trust game indicated that incivility has a large detrimental effect on trust. The average offer in the trust game was \$1.33 out of a possible \$3. Of those who played the trust game, 40 received uncivil messages. These participants offered an average of \$1.17. Eleven (28%) of these participants offered zero, and the average of the non-zero offers was \$1.62. The participants who received civil messages offered \$1.46 on average. Only two (12%) of these participants offered zero to their teammates and the average of the non-zero offers was \$1.66. These findings show that people had less trust in the confederate when they received uncivil messages than when they received civil messages (Hypothesis 2).

Table G2. Mean offers in trust game following uncivil and civil messages

The difference between the offers can be explained by the expectations participants had from their teammates. Participants with uncivil teammates who offered more than zero expected on average 27.31% of the tripled amount to be returned to them while those with civil teammates who offered more than zero expected on average a return of 39.47%, meaning that they would recoup their investment. The post-game survey confirmed that the participants receiving uncivil messages distrusted their teammates relative to those receiving civil messages (Hypothesis 2). The correlation between survey-measured trust and offers in the game was 0.42, however both of these measures independently support the hypothesis that incivility leads to lack of trust.

Rapport and Positive Affect. The participants who received uncivil messages also felt lower rapport with their teammates and thought their teammates had less warmth and competence ($p < 0.01$). The warmth measures mediate between the incivility condition and the trust measures ($p < 0.001$). This supports our hypothesis that people who receive uncivil online messages view the uncivil sender as violating social norms, and are therefore less likely to develop a trusting relationship with them (Hypothesis 3) and will view them as less trustworthy (Hypothesis 2).

Figure 2. Study 2 mediation analysis

Study 3

In studies 1 and 2 we assume that offline workplace definitions of incivility (talking down, taking credit, cursing, etc.) apply to online discussions. In study 3 we challenge this assumption to question which particular online behaviors are considered uncivil. Additionally, we want to distinguish between uncivil online behavior and angry online behavior, so we conducted two pilot studies to collect and rate uncivil and angry online behavior. In this study we were testing two separate ideas – online incivility (violation of online norms of mutual respect) and online anger (online expression of the emotion of anger, not necessarily in violation of online norms).

Study 3a

First we solicited suggestions from 99 Mechanical Turk participants, asking them “What are some things that uncivil (angry) people do in online chats, emails, and text messages?” We also asked them to rank this behavior in terms of incivility and anger for each of the digital scenarios.

The average age of these participants was 32.3 (ranging from 19-68) and 51 were in the Millennial generation (aged 19-30 in 2013). This generation was isolated because they are often considered the shapers of online norms, especially regarding interaction through social media and online messages (Howe and Strauss, 2007).

From this pilot we found that the highest ranked examples of online incivility by both Millennials and non-Millennials were sexual or pornographic messages, cursing, and racist/offensive language. Flirting was considered uncivil by non-Millennials.

Participants found foul or derogatory language and the use of CAPS to show significant online anger. Additionally, Millennials rated logging off in the middle of a chat session to show significant anger. In this study we did not directly ask participants to differentiate between anger that violates online norms and anger that does not violate online norms, but we did find that although both cursing and CAPS showed anger, cursing was ranked as more strongly uncivil.

Study 3b

Method. We tested the highly uncivil and angry examples in a chatting context. Using a story that we were trying to help tutors learn how to deal with different parents, we showed participants a fabricated chat in which a tutor solicited clients. The parents in the chat responded to the tutor with either norm-violating incivility (cursing, racist comments, or sexually suggestive messages,) norm-abiding expressions of anger (through the use of CAPS,) or neutral chats. (See Appendix G.) We switched the gender of the tutor and the parent so that for each condition some participants saw a male parent and a male tutor, a female parent and a male tutor, a male parent and a female tutor, or a female parent and a female tutor.

Mechanical Turk participants were randomly assigned to each incivility condition and gender condition. They were asked to read the chats and then rate whether they thought the parents were civil or uncivil (on a 5-point scale,) or angry (on a 3-point scale). Participants were then asked to rate the parents' chats in the interactions according to the features of workplace incivility that Cortina et al. (2001) describe (Appendix D). Participants also answered questions about levels of trust, warmth and

competence (termed “positive affect,”) and negative affect they felt regarding the parents in the chats (adopted from Fiske, et al., 2002 and Dunn, Ruedy, and Schweitzer, 2012) (Appendices B and C).

Results. The 421 participants from the United States ranked the cursing, racist comments, and CAPS as very angry. These rankings were highly significant when compared to the polite condition ($p < 0.001$) even when controlling for age, gender of the participants, and gender of the stories’ characters. Furthermore, participants ranked cursing as significantly more uncivil than racist comments ($p < 0.05$) or CAPS ($p < 0.001$). This suggests that although using CAPS often shows anger, it does not violate online norms to the same extent as cursing and is therefore not considered as uncivil.

On the survey measures, all four types of incivility were rated lower on trust and positive affect, and rated higher on negative affect, when controlling for age and gender of the participants ($p < 0.001$).

Table H1. OLS of survey responses following story prompts

Discussion

In study 3 we defined certain online behaviors which are considered uncivil. We also differentiated online cursing as significantly more uncivil than the other forms of incivility we tested. This indicates that people consider cursing a significant violation of online norms.

In this study we also saw how viewing incivility in an online conversation affects a third party's perception of the uncivil typist. Reading uncivil chats – particularly cursing, racist comments, and sexually suggestive messages – lowers the third party's perception of the uncivil person's trustworthiness, warmth, and competence.

Study 4

In study 2 we showed that people interacting with an uncivil person online have lower trust and rapport. However, approximately half the participants recognized that the confederate was a fake. Therefore we conducted an additional study which follows a similar methodology except that instead of a computer response we had real people interact with each other. We then analyzed the effects of incivility and CAPS in the chat messages based on the forms of online incivility we discovered in study 3.

Method

Participants. 252 Mechanical Turk online survey participants were recruited to read an article and play an online game in exchange for a small reward.

Procedure. Participants read an article about a physician whose patient tells him he committed a crime. The participants were then paired with each other and chatted online with their partners for five minutes. They were asked to chat about the article, which 81% did. Then participants played the same trust game from Berg, Dickhaut and McCabe (1995) as in study 2. They were also asked the same set of survey questions about positive affect.

A research assistant coded the texts of the chats for whether they had a conversation and whether they chatted uncivilly. Since the participants do not know each other's race or gender, we did not code for racist comments or sexually suggestive messages in this study. Instead we looked at cursing and use of CAPS.

Results

Some of the participants did not have conversations, as they preferred to spend the five minutes doing something else. These participants were excluded from our results.

We analyzed the results from 204 participants, of which 200 played the trust game. (Two pairs did not answer the test questions about the trust game correctly and did not play.)

Some participants discussed the issues and came to an agreement, as in the following example:

P1: what do you think about it?

P2: I think he should do as he [the author] suggested. [...]

P1: i thought it was very interesting. i can understand both sides. but i agree with the non

doctor writer.

P2: I agree. [...]

P1: actually thinking even more about it

the dr could have just told the cops [...]

P2: yes i agree.

In other conversations, the participants took different sides of the argument. For example:

P3: What did you think of the "dilemma"?

P4: It is very complicated

and I think there is no right thing to do

What about you?

P3: I do not believe that the Hippocratic Oath cover criminal confessions

P4: I think it cover everything

P3: I believe it only covers things that are medically relevant

Cursing. Only two of the conversations coded included cursing, so we did not analyze the effect cursing had on the game outcome. However the fact that cursing did not frequently arise in these natural conversations may itself indicate that cursing violates online norms.

Capital letters (CAPS). Overall, 28 participants (in 13 unique conversations) used CAPS in one form or another. Some people used CAPS as their “voice” throughout the entire discussion, but most people used CAPS for a few words as a way of emphasizing a point or showing emotion. At times CAPS was applied to just one word. For example, in a heated debate about the physician’s responsibilities, participants wrote:

P5: I agree with trying to tell the patient to confess

I'm not sure if revealing violates patient-doctor confidentiality though

P6: TRUE

but I do think that ultimately the innocent persons life could be in danger -
prison is dangerous.

Here P6 capitalized the word “TRUE” to show emphasis and interest.

In analyzing the trust game, we only looked at the first mover, since she is the only player who has to trust (the other either upholds the trust or keeps the money for herself.) On average, the 100 people who played the first mover gave \$1.92 (out of \$3). The 13 first movers whose conversations included CAPS gave on average \$2.08, slightly higher but not significantly different from the average.

The use of CAPS had a significant impact on the positive affect survey measures. The average positive affect measurement of 8 items, on a 7-point Likert scale, was 43.65 overall and 46.45 for the 26 participants whose conversations included CAPS. Though the positive affect scale had high overall internal consistency ($\alpha=0.97$) we were interested in understanding what aspects of positive affect were particularly high for CAPS. What we found was that two items – trustworthiness and sincerity – accounted for most of the “extra” positive affect among people who had CAPS in their conversations.

Table 11. OLS of CAPS effect on individual positive affect items

Discussion

Use of CAPS is commonplace in digital communication, and therefore is not in violation of online norms. The results from study 4 suggest that people who use CAPS in these conversations seem more sincere and are highly trusted. It also suggests that CAPS, though it is usually meant to indicate strong emotion, is not considered to be a norm-defying type of online behavior, and does not affect how much people are willing

to trust (Hypothesis 4). CAPS is considered an acceptable form of expressing emphasis or tone.

Study 5

Because strong incivility such as cursing did not arise naturally in study 4, we tested incivility in a more direct study.

Method

Participants. We recruited 152 Mechanical Turk participants who had not participated in any of the previous studies to read an article and play a game.

Procedure. Similar to study 4, participants read an article, (either about gun control or same sex marriage,) chatted for 3 minutes, played the trust game, (as in studies 2 and 4) and then answered survey questions about their teammates. The main difference is that in study 5 a (human) confederate chatted with participants and acted as the trustee in the trust game. Based on the results of study 3, participants were randomly assigned to incivility (cursing,) CAPS, or neutral condition. The research assistant chatted with each participant based on the random assignment.

132 people participated via Mechanical Turk and played the trust game. Of those, 57 were in the cursing condition, 33 in CAPS, and 42 in the neutral condition. Twenty participants did not have conversations or did not play the game due to technical problems.

Results and Discussion

Manipulation Check. We asked participants to rate the incivility of their teammates. Those who chatted with a cursing confederate had significantly higher incivility ratings than those in the neutral condition ($p < 0.05$), whereas those who chatted with a CAPS-using confederate did not rate their partners as particularly uncivil. This confirms our previous finding that CAPS is not considered norm-defying in digital conversations.

Trust. The cursing incivility condition negatively affected trust in this game, as people in that test condition sent \$1.54 on average (out of \$3,) compared with \$1.75 sent on average by participants in the neutral condition (Hypothesis 2). In contrast, those who were spoken to with CAPS sent an average of \$1.71, just slightly less than those in the neutral condition.

After they sent money in the trust game, but before they found out how much money they received in return, we asked participants how much money they expect the other person to send back. The purpose of this question was to check that the results of the game were actually showing whether the participant trusted the other person – that is, whether they were willing to take a risk *because they believed that the other person would reciprocate*. We analyzed these figures as percentages of the amount they sent and found that cursing during the chat significantly lowered the percentage people expected to receive in return ($p < 0.05$) (Hypothesis 2). Using CAPS, however, did not significantly affect the mean expected return (Hypothesis 4).

Table J1. Mean offers in trust game following online chats

The results from the surveys following the game (but before they learned how much money would be returned) corroborated the analysis of the game. Even when controlling for gender, age, which article they discussed, whether they felt strongly about the issue in the article and whether they agreed with the confederate, cursing in the chat negatively affected the answers to the trust ($p < 0.05$) and positive affect ($p < 0.01$) surveys. Additionally, the responses to the trust questionnaire indicate that trust mediated between the type of incivility and the amount of money sent in the game ($p < 0.001$).

Table J2. OLS of survey responses following online chats***Figure 4. Study 5 mediation analysis***

General Discussion

In these studies we found that cursing is one example of online incivility - low-intensity deviant behavior which violates online norms. Moreover, the effects of this type of incivility are not contained to the traditional workplace. Instead we found that incivility from a stranger online affects perceptions of the uncivil person's positive affect and warmth. Such incivility endangers the ability of the uncivil party to develop relationships involving rapport and trustworthiness.

We found that people lower their expectations of trustworthy behavior when confronted with uncivil remarks from strangers online. They are less willing to accept vulnerability based on such behavior, and are less trusting of uncivil individuals online. People are also less likely to cooperate with those who curse during digital interactions, especially if there is a risk to their personal benefit.

What we see in these studies is that just as workplace incivility is a form of antisocial employee behavior (Andersson and Pearson, 1999) – online incivility is a form of antisocial virtual behavior. And just as workplace incivility inhibits cooperation and endangers relationships (Cortina 2008) – online incivility inhibits online cooperation and challenges online relationships.

In the scenarios we looked at, online incivility harmed the efficiency of interactions in a way which hurt the uncivil person and the receiver of incivility. These findings are particularly important because of the unique features of today's modern workplace. On the one hand, a large extent of modern communication with bosses, colleagues, and clients new and old is conducted online. On the other hand, the old-

fashioned notions of cooperation and trust still play major roles in business' success (Somers and Nelson, 2001).

Additionally, in this paper we began to explore the different types of online incivility. We show that use of CAPS does not discourage trust to the same extent as cursing. This supports our theory that only norm-violating incivility which signals a deviance from the group causes distrust, lack of cooperation, and lower rapport. However use of capital letters, while often indicating yelling, does not deviate from online norms and therefore does not have the same detrimental effect on trust and rapport.

We also found another interesting outcome of our studies which we do not discuss in this paper. The participants in our studies saw people who displayed online incivility as being less competent relative to civil people. This was true for all of the studies in which we asked participants about competence (as part of positive affect).³⁹ The correlation of incivility and perception of competence is an interesting finding and requires further research to understand the theory and mechanisms involved.

Online norms vary considerably among different cultures. Our studies focus on United States-based participants, however future research should look at different online norms of civility and their effects on behavior. Vignovic and Thompson's (2010) show that people have negative perceptions of uncivil people even if they know the uncivil person is from a different culture, suggesting that the effects of incivility cross cultural

³⁹ This result was demonstrated in studies 2 and 3b with a $p < .001$ significance level, and in study 5 with a $p < 0.05$ significance level. In study 4, CAPS did not significantly affect competence ratings.

borders. The cross-cultural implications of online incivility are particularly relevant to the modern workplace, and guidelines for international online civility may improve global communication, trust, and cooperation.

We look solely at incivility as it relates to trust and cooperation. However many other ethical or unethical actions can also affect these outcomes. We believe that in addition to incivility, many unethical actions in online communication discourage cooperation and trusting relationships, and hope that future research continues to uncover this association.

Kollock (1996) wrote: “Social interaction and organization in online communities is not an issue that can be ignored, nor is the challenge simply to design a better user interface. But it is also incorrect to say that there is nothing much one can do – there are important steps that can be taken to encourage the development of successful online worlds.” One way to develop a more cooperative and trusting online world is through encouraging what morality demands - online civility.

Tables And Figures

Table F1. Effect of incivility and anger on production following the message

	Model 1	Model 2
Received uncivil messages	4.60 (0.77) ***	4.50 (0.80) ***
Received angry messages		1.12 (1.66)
Round number	0.31 (0.07) ***	0.31 (0.07) ***
First round price	-0.37 (0.05) ***	-0.37 (0.05) ***
Constant	54.27 (1.33)	54.27 (1.33)
N	4979	4979
Adjusted N	509	509
R-squared	0.08	0.08

Table F2. Effect of receiving uncivil messages on total game profitability

	Total Profit
Received uncivil messages	-804.39 (248.20) **
Number of rounds	856.41 (63.81) ***
First round price	147.04 (15.98) ***
Constant	-1773.43 (890.28)
N	1527
Adjusted N	509
R-squared	0.49

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Table F3. Effect of sending uncivil messages on total game profitability

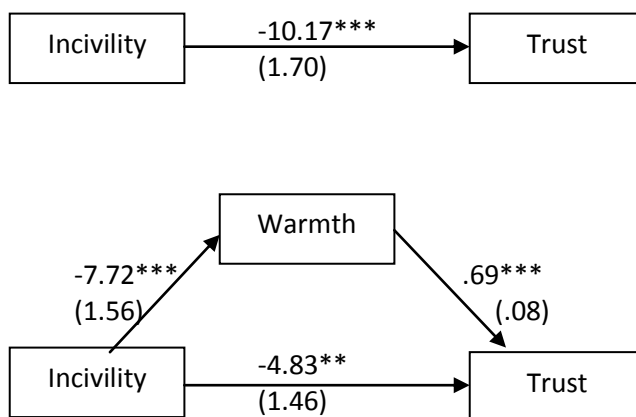
	Total Profit
Sent uncivil messages	-1095.18 (228.58)***
Number of rounds	856.75 (63.93)***
First round price	147.92 (15.75)***
Constant	-1842.25 (883.71)
N	1527
Adjusted N	509
R-squared	0.50

Table G1. OLS of survey responses following uncivil and civil messages

	Workplace Incivility	Rapport	Warmth	Competence	Trust
Incivility 1: Cursing	18.30 (2.18)***	-17.39 (2.13)***	-15.04 (1.79)***	-4.44 (1.08)***	-15.31 (2.35)***
Incivility 2: Pathetic	26.53 (2.18)***	-18.03 (2.31)***	-16.51 (1.95)***	-6.52 (1.17)***	-12.70 (2.55)***
No response	8.82 (2.22)***	-15.70 (2.17)***	-13.91 (1.83)***	-4.77 (1.10)***	-7.17 (2.40)***
Male	-0.14 (1.57)	-1.99 (1.54)	-2.68 (1.30)	0.28 (0.78)	-0.28 (1.70)
Age	0.10 (0.07)	-0.08 (0.07)	-0.02 (0.06)	0.03 (0.03)	-0.01 (0.07)
Constant	5.88 (3.40)	39.80 (3.32)	34.16 (2.80)	16.32 (1.68)	40.70 (3.66)
N	113	113	113	113	113
R-squared	0.58	0.46	0.48	0.25	0.31
Adjusted R-squared	0.56	0.43	0.46	0.22	0.28

Table G2. Mean offers in trust game following uncivil and civil messages

	Mean Offer	Mean expectation	N
Range	\$0 - \$3		
Incivility 1: Cursing	1.28 (1.05)	25.7% (26.93%)	27
Incivility 2: Pathetic	0.95 (0.86)	30.89% (26.82%)	13
No response	1.52 (0.94)	28.65% (19.52%)	21
Neutral	1.46 (0.72)	39.47% (15.26%)	17

Figure 3. Study 2 mediation analysis

The effect of the incivility prompts on trust survey responses is mediated by warmth.

Table H1. OLS of survey responses following story prompts

	Workplace Incivility	Anger	Trustworthiness ²	Trust	Positive Affect	Negative Affect
Cursing	3.31 (0.12) ***	1.69 (0.07) ***	-2.71 (0.19) ***	-18.67 (1.34) ***	-24.60 (1.29) ***	16.91 (1.33) ***
Racist	3.09 (0.11) ***	1.25 (0.06) ***	-3.03 (0.18) ***	-18.31 (1.31) ***	-25.72 (1.27) ***	17.04 (1.30) ***
CAPS	2.36 (0.11) ***	1.17 (0.06) ***	-1.56 (0.18) ***	-11.54 (1.31) ***	-18.21 (1.27) ***	12.40 (1.30) ***
Suggestive	2.96 (0.12) ***	0.01 (0.07)	-3.40 (0.19) ***	-18.61 (1.36) ***	-21.69 (1.31) ***	17.47 (1.35) ***
Male	0.22 (0.07) **	0.02 (0.04)	-0.19 (0.12)	-1.75 (0.87) *	-1.48 (0.84)	1.08 (0.86)
Age	-0.01 (0.00) **	-0.00 (0.00)	-0.01 (0.01) *	-0.03 (0.38)	-0.09 (0.37) *	-0.16 (0.04) ***
Constant	1.54 (0.16)	1.08 (0.09)	5.20 (0.26)	44.36 (1.86)	42.59 (1.79)	17.25 (1.84)
N	421	421	421	421	421	421
R-squared	0.73	0.73	0.52	0.42	0.57	0.39
Adjusted R-squared	0.73	0.73	0.51	0.41	0.56	0.39

2. Trustworthiness is included in the positive affect questionnaire but was analyzed separately.

Table I1. OLS of CAPS effect on individual positive affect items

(Only hypothesized positive affect items were tested individually)

	Positive Affect Overall	Trustworthy	Sincerity
CAPS	3.25 (1.64) *	0.51 (0.24) *	0.62 (0.25) *
Age	-0.02 (0.05)	-0.00 (0.01)	-0.00 (0.01)
Male	-0.67 (0.15)	-0.13 (0.17)	-0.10 (0.17)
Constant	44.32 (1.98)	5.31 (0.29)	5.45 (0.30)
N	204	204	204
R-squared	0.02	0.03	0.03
Adjusted R-squared	0.01	0.01	0.02

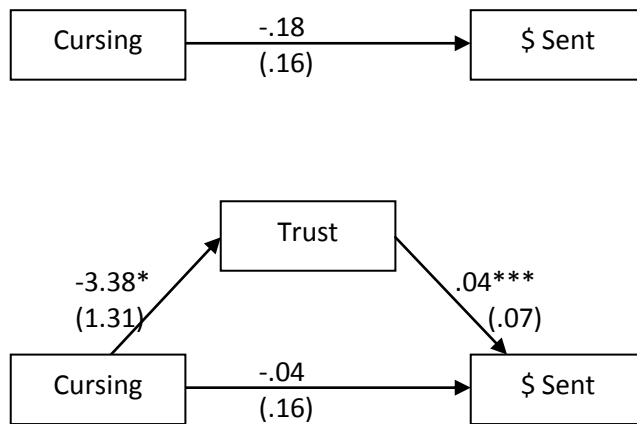
Table J1. Mean offers in trust game following online chats

	Mean Offer	Mean expectation (% of tripled amount sent)	N
Range	\$0 - \$3		
Overall	1.65 (1.00)	28.30% (25.61%)	132
Cursing	1.55 (1.04)	23.54% (24.92%)	57
CAPS	1.72 (0.95)	30.70% (24.53%)	33
Neutral	1.75 (0.98)	32.87% (26.84%)	42

Table J2. OLS of survey responses following online chats

	Workplace Incivility	Trust	Positive Affect	Rapport
Cursing	3.41 (1.34)*	-3.15 (1.71)*	-5.43 (1.92)**	-2.36 (1.67)
CAPS	2.32 (1.59)	-0.29 (2.04)	-0.84 (2.29)	-0.92 (1.98)
Male	0.95 (1.14)	0.29 (1.46)	-0.38 (1.63)	1.48 (1.42)
Age	0.02 (0.05)	0.09 (0.07)	0.04 (0.08)	-0.03 (0.07)
Agreed with partner	-5.22 (1.27)***	4.38 (1.62)**	7.37 (1.82)***	9.02 (1.58)***
Felt strongly	0.75 (1.22)	1.22 (1.56)	0.39 (1.75)	1.30 (1.52)
Article (gun control)	0.17 (1.47)	0.17 (1.88)	0.06 (2.11)	0.85 (1.83)
Constant	10.61 (2.49)	34.12 (3.19)	37.35 (3.58)	21.35 (3.11)
N	132	132	132	132
R-squared	0.21	0.12	0.21	0.26
Adjusted R-squared	0.17	0.08	0.17	0.22

Figure 4. Study 5 Mediation analysis



Responses to the trust questionnaire mediate the effect of the uncivil cursing discussion on the amount of money sent in the trust game.

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APPENDICES

Appendix A: Trust Questions

Adapted from Johnson-George and Swap, 1982 and Dunn and Schweitzer, 2005

Rate on a scale from 1 (not likely) to 7 (very likely)

*If my teammate gave me a compliment I would question if s/he really meant what was said.

*I wouldn't want to buy a piece of used furniture from my teammate because I wouldn't believe his/her estimate of its worth.

I would be able to confide in my teammate and know that s/he would want to listen.

I could expect my teammate to tell me the truth.

*If my teammate unexpectedly laughed at something I did or said, I would wonder if s/he was being critical and unkind.

My teammate would not intentionally misrepresent my point of view to others.

*If my teammate knew what kinds of things hurt my feelings, I would worry that s/he would use them against me.

If my teammate didn't think I had handled a certain situation very well, s/he would not criticize me in front of other people.

If I told my teammate what things I worry about, s/he would not think my concerns were silly.

(items reverse coded)*

	Negotiating with the millennial generation			Why the f*** don't they trust?		
	Study 1	Study 3	Study 4	Study 2	Study 3b	Study 5
Cronbach's Alpha for Trust	.75	.86	.78	.83	.82	.78

Appendix B: Rapport Questions

Adapted from Jap, Robertson and Hamilton (2011)

Rate on a scale from 1 (strongly disagree) to 7 (strongly agree)

I would play another game with this teammate

I like this teammate

I felt like my teammate and I were on the same wavelength

I felt rapport with my teammate

I felt coordinated with my teammate

I felt aware of and interested in my teammate

	Negotiating with the millennial generation			Why the f*** don't they trust?	
	Study 1	Study 3	Study 4	Study 2	Study 5
Cronbach's Alpha for Rapport	.93	.94	.94	.95	.93

Appendix C: Affect Questions

Adapted from Fiske, Cuddy, Glick, and Xu 2002 and Dunn, Ruedy, and Schweitzer 2012

Positive Affect:

I feel that [this parent] [my teammate] is... (on a scale of 1 (strongly disagree) to 7 (strongly agree))

Competent

Confident

Intelligent

Friendly

Well-intentioned

Trustworthy

Good-Natured

Sincere

Negative Affect:

Reading what this parent wrote makes me feel...

Uncertain

Contemptuous

Inferior

Disgust

Stress

Closeness*

Repulsed

Apprehensive

(* item reverse coded)

	Negotiating with the millennial generation		Why the f*** don't they trust?		
	Study 1	Study 4	Study 2	Study 3b	Study 5
Cronbach's Alpha for Positive Affect	.94	.95	.95	.95	.95
Cronbach's Alpha for Negative Affect				.85	

Appendix D: Incivility Questions

Adapted from Cortina, Magley, Williams & Langhout, 2001

Rate on a scale from 1 (strongly disagree) to 7 (strongly agree)

Did your teammate put you down?

Was your teammate condescending to you?

Did your teammate make demeaning or derogatory remarks?

Did your teammate address you in unprofessional terms?

Did your teammate ignore or exclude you?

Did your teammate doubt your judgment?

*Was your teammate civil with you?

(* item reverse coded)

	Why the f*** don't they trust?		
	Study 2	Study 3b	Study 5
Cronbach's Alpha for Incivility	.90	.88	.85

Appendix E: “OPEQ” Simulation Case Information as presented to participants.

You are part of a small group of decision makers in a large oil producing nation. Your group will make a series of oil production decisions, with the goal of maximizing profit for your country.

There are three oil producing countries in your world: Alba, Batia, and Capita. Each of these countries can produce a maximum of 75 million barrels of oil each period.

In general, you would like to produce (and sell) more oil, but the price of oil declines as total supply grows. If we represent the production decisions (in millions) for Alba, Batia, and Capita as the sum of $(Q_A + Q_B + Q_C)$, the price, P , is determined as follows: **Price**
 $= P = 70 - .3(Q_A + Q_B + Q_C)$

Each country has a production cost of \$1.00 per barrel, and faces the same profit equation:

$$\text{Profit} = Q_i(P - 1) \text{ Where } i = \text{Alba, Batia, or Capita}$$

Each round represents one period and each period you will make a production decision (e.g. 50.3 million barrels). The amount of oil you and the other countries produce will be traded on the World Oil Exchange (and the total amount of oil produced will influence your profits).

The three countries (Alba, Batia, and Capita) have no diplomatic relations, and you will not find out how much each other produces until after every country has made their production decision for the coming period. That is, each country will have to set their production level for the upcoming period without knowing how much other countries will produce.

Your goal is to maximize profits for your country (summed over each period).

You are not sure how many periods of decisions you will make, but before you make your final decision (for the last period) everyone in your world will receive an announcement that the upcoming period will be the final round.

Appendix F: “OPEQ” Simulation sample summary

OPEQ

[logout](#)
[rules](#)

Round Status:

OPEN

Team: Batia

Future Production

Current Information

Number of Competitors: 2

Year 2 Output:

In Barrels of Crude Oil

Enter Output

Round will end in:

3:24

Enter output between 0.0 and 75.0 with up to one decimal place.

General Information

Demand Curve: $Price = 70 - .3 * (Q_a + Q_b + Q_c)$

Profit Analysis: $Profit = Q_i * (Price - 1)$

Messages

From	Subject	Round

Total Batia Profits: \$912.00 (26% of World Profits)

Total World Profits: \$3,511.20

Year	Country	Output (in barrels)	Price (per barrel)	Profit
1	Alba	75.0	\$23.80	\$1,710.00
	Batia	40.0	\$23.80	\$912.00
	Capita	39.0	\$23.80	\$889.20

OPEQ is a production of the Alfred P. West Learning Lab

The Wharton School
University of Pennsylvania

Students see this page as they make their decision of how much oil to produce in each round. The page indicates past performance of all countries in the world. At the bottom right students receive text messages from other countries in the digital messaging communication simulation.

Appendix G: Why the f*** don't they trust: study 3 chats

**Names were alternated and participants were randomly assigned to either male tutor and male parent, male tutor and female parent, female tutor and male parent, or female tutor and female parent.*

Please read this online chat from one of our tutors:

Cursing chat

Simon [Regina]*: Hello, I'm a part time tutor for high school students. Do you have a son or daughter in high school?

Tom [Joyce]*: yes. what do you want?

Simon: Are they struggling with a certain subject in school? I know that when my parents first came to this country, tutors played an important role in their academic success. For this reason, I have decided to be a part time tutor for high school students.

Tom: are you assuming my kids are f*cking stupid?

Simon: No, I know that students often have questions about class material that they may not want to ask their teachers. As a tutor, I can help boost your child's grades.

Tom: my kids don't need any f*cking tutoring. my kids go to a good school and have damn good teachers.

Simon: I am sure your children go to an excellent school, but if they ever need help, I'm available in the evenings and would love to help your child in any subject.

Tom: yea, well you can just leave me the hell alone. my kid doesn't need any f*cking help.

Racist Chat

Simon: Hello, I'm a part time tutor for high school students. Do you have a son or daughter in high school?

Tom: yea, I have two sons.

Simon: Are they struggling with a certain subject in school? I know that when my parents first came to this country, tutors played an important role in their academic success. For this reason, I have decided to be a part time tutor for high school students.

Tom: well, you can go back to wherever you came from and tutor the kids there. we don't need you here.

Simon: I am sure your children are very bright, but if they ever need help, I'm available in the evenings and would love to help your children in any subject.

Tom: listen, we don't need you people here. how much can a person who's not even from here help my children?

Simon: I am more than capable of tutoring students.

Tom: just go back to your country and leave me alone.

Capital Letters Chat

Simon: Hello, I'm a part time tutor for high school students. Do you have a son or daughter in high school?

Tom: I'M NOT INTERESTED

Simon: I don't mean to bother you, but I know that many high school students struggle with class material and may need extra help. When my parents first came to this country, tutors played an important role in their academic success. For this reason, I have decided to be a part time tutor for high school students.

Tom: if I needed help I would have LOOKED YOU UP IN THE YELLOW PAGES

Simon: I hope you understand that I'm not trying to spam you. I just wanted to see if my services could be of help to you and your children.

Tom: NO, I DON'T NEED YOUR HELP.

Simon: Okay, have a good day.

Tom: ...BYE.

Sexually Suggestive Chat

Simon: Hello, I'm a part time tutor for high school students. Do you have a son or daughter in high school?

Joyce: I do have a son but let's talk about something else. are you single?

Simon: I'm not sure if that is relevant. If you have a child who is struggling with certain subjects in high school, I can be of great help. I know that when my parents first came to this country, tutors played an important role in their academic success. For this reason, I have decided to be a part time tutor for high school students

Joyce: how about I take you out on a date and we can have some fun?

Simon: No thank you.

Joyce: I work out every day and Im really hot, you can come to my house and we'll take it from there...

Simon: No... goodbye.

Neutral Chat

Simon: Hello, I'm a part time tutor for high school students. Do you have a son or daughter in high school?

Tom: I have two children in high school. one daughter and one son.

Simon: Are they struggling with a certain subject in school? I know that when my parents first came to this country, tutors played an important role in their academic success. For this reason, I have decided to be a part time tutor for high school students.

Tom: oh, I'm sorry but I don't think my children need tutoring right now.

Simon: I know that students often have questions about class material that they may not want to ask their teachers. As a tutor, I can help boost your child's grades.

Tom: I'm sure you're a great tutor, but my kids don't need tutoring – I will keep you in mind if they do in the future.

Simon: Thanks for your consideration

Tom: you're welcome. have a good day.

Simon: Thank you. Good day to you as well.