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Signature:

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Donald Young Date

Anticipating Human Behavior: How Social Norms and Social Ties Influence Compliance with Financial Reporting Standards

By

Donald Young
Doctor of Philosophy

Business

_____

Kathryn Kadous
Advisor

_____

Ryan Hamilton
Committee Member

_____

Kristy Towry
Committee Member

_____

Gregory Waymire
Committee Member

Accepted:

_____

Lisa A. Tedesco, Ph.D. Dean of the James T. Laney School of Graduate Studies

_____

Date

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Donald Young
B.S., M.Acc., Brigham Young University, 2008

Advisor: Kathryn Kadous, Ph.D.

An abstract of
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Abstract

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By Donald Young

This study examines how the source and nature of reporting standards jointly influence compliance with those standards. More specifically, I examine how decision makers' identification with the source of the standards moderates compliance with different types of standards. Type refers to whether the accounting standard is descriptive or injunctive. Source refers to the entity promulgating the accounting standards. I conducted an experiment in which participants faced a direct trade-off between reporting aggressively to maximize their personal wealth and reporting conservatively to comply with the standard. Consistent with expectations, I find that identification with the source causes higher compliance for an injunctive standard but that identification does not moderate the impact of a descriptive standard. Descriptive standards are influential regardless of identification with the source. Thus, when identification with the source is low, descriptive guidance leads to greater compliance than does injunctive guidance. These results further our understanding of the role social forces play in the standard setting environment, allowing regulators to better identify standards that will have a high probability of achieving conformity.

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CONTENTS

I. Introduction

Generally Accepted Accounting Principles (GAAP) is constantly evolving in ways that have potential consequences for managers' reporting behavior; yet, it is not clear that these consequences are considered when standards are changed. I examine how two critical features of reporting standards—their type and source—affect compliance with those standards. Type refers to whether the standard is descriptive or injunctive. Consistent with the notion of *generally accepted accounting principles*, early accounting standards *described* common practice (Carey 1969, 177; Zeff 1984, 452). However, recent standards tend to be more injunctive in nature, prescribing how managers *should* report. Standard setters generally develop injunctive standards based on theories of what users of accounting information *should* be like and what information they *should* prefer (e.g. standards that refer to conceptual framework documents, such as A Statement of Basic Accounting Theory [ASOBAT]) (Young 2006), or are legislated by Congress (e.g. Sarbanes-Oxley Act 2002). I examine how these two types of standards communicate different information about *descriptive* and *injunctive norms* and how this information influences the extent to which individuals comply with standards.[1]

The second feature of reporting standards I examine is the source—the person or organization promulgating the accounting standards. Initial standard setters were part of, and appointed by, practitioner groups (e.g., the American Institute of Accountants' [AIA] Committee on Accounting Procedure [CAP]). Modern standard setters (e.g., the Financial Accounting Standards Board [FASB]) are independent of practitioner groups, and are

[1] A *descriptive norm* refers to what is typical or normal behavior– what most people do. An *injunctive norm* refers to rules or beliefs about what should be done; in other words, what people say or believe they ought to do (Cialdini et al. 1991). For example, a codified norm, such as a standard or a rule, can refer to what people typically do (*descriptive*) or what they should do (*injunctive*).

highly supervised by the SEC—with some regulations even coming from Congress (e.g., Sarbanes-Oxley Act [SOX] of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act [Dodd-Frank] of 2010). Prior literature shows social affiliations influence the extent to which individuals adhere to the norms of groups. I extend prior research by examining how identification with the standard setting body influences the extent to which individuals adhere to accounting standards. Additionally, I examine the joint influence of standard type and level of identification on individuals' compliance to accounting standards.

Compliance is generally defined as the extent to which agents abide by and fulfill rules and norms (Checkel 2001). In the financial reporting context, compliance with standards determines the quality of reports, and thus, their usefulness. Regulators are concerned that we are witnessing an erosion in the quality of earnings and, therefore, the quality of financial reporting and that "wishful thinking may be winning the day over faithful representation" (Levitt 1998). The primary regulatory response to these concerns is to use compulsory techniques that constrain aggressive behavior. For example, the recent emphasis on objectives-oriented standards reflects regulators' desire to improve compliance by minimizing "the degrees of freedom to achieve 'desired' accounting results" (SEC 2003, Section 1[c]).[2] Regulators have also emphasized increased monitoring as a means for increasing compliance. For example, the creation of the Public Company Accounting Oversight Board (PCAOB) and requirements to enhance corporate

[2] The SEC's Division of Enforcement reports annually on enforcement goals, including the percentage of firms receiving deficiency letters that take corrective action in response to all exam findings. In 2011, the SEC filed 735 enforcement actions, an 8.6 percent increase from 2010. This represents the highest number of cases ever filed by the Division in a single fiscal year (SEC 2012, 2).

governance within SOX (2002) and Dodd-Frank (2010)increased monitoring and oversight.

In contrast to compulsory techniques, regulators appear to give little consideration to the use of persuasive techniques. Yet, some practitioners argue that "persuasion is the 'fundamental instrument' and 'principal engine' for securing compliance" (Checkel 2001). For example, early in its tenure, the American Institute of Certified Public Accountants (AICPA) emphasized that persuasion rather than compulsion be used to achieve compliance with reporting standards (1958, 63). There is growing evidence that personal and social considerations have an equal or greater influence on compliance behavior as compared with enforcement activities (e.g., taxpayer compliance [Davis et al. 2003], and public service announcements [Cialdini 2010]). I extend this research by examining the roles that two social factors—identification with the standard-setter and social norms—play in influencing the persuasive power of and compliance with financial reporting standards.

There has been much debate about the impact of principles- versus- rules-based standards on reporting compliance. As a result, various questions have arisen about the proper *form* of accounting standards, and *who* should provide and set implementation guidance for accounting standards. The SEC's view is that, "[t]he question is not whether such guidance will be provided, but when and by whom. . . . Who has the responsibility for such guidance and its authoritativeness are key questions" (SEC 2003). My theory and results imply that the source of this guidance will impact financial reporting managers' willingness to comply with reporting standards.

I propose that the identification level with the source (high, low) moderates the effect of type of accounting standard (descriptive, injunctive) on reporting behavior. Social psychology theory proposes that social norms influence individuals' behavior to the extent they are salient and perceived to be relevant. I posit that descriptive standards make peers' behavior in the reporting environment salient; therefore, people will tend to follow their peers' behavior, regardless of the source of the information. In contrast, I posit that when individuals identify more (less) with the source of the standard, they will be more (less) likely to view an injunctive standard as relevant and be more (less) likely to comply with the standard. This implies that participants will comply with reporting guidance at the lowest level when identification is low and reporting guidance is injunctive.

I test my predictions in an experiment with a full-factorial 2 x 2 between-participants design, with guidance type (descriptive, injunctive) and identification level (high, low) as manipulated independent variables. In the study, participants face a direct trade-off between reporting aggressively to maximize their personal wealth and reporting conservatively to comply with a standard. That is, more aggressive reporting increases earnings in the experiment while more conservative reporting reduces earnings. Experimental payoffs were intended to capture the incentives of a reporting manager with performance-based compensation. To test my hypothesis, I measure the extent to which participants comply with the reporting guidance.

Consistent with predictions, I find that participants comply with reporting guidance at the lowest level when identification is low and reporting guidance is injunctive. Interestingly, this condition might be the most akin the current U.S. setting.

This result is because (1) simple main effects reveal that when identification with the source is low, that descriptive guidance leads to greater compliance with reporting guidance, compared to injunctive guidance; and (2) identification has a larger effect on compliance behavior when reporting guidance is injunctive versus descriptive. I also find that reporting guidance, in general, is effective for influencing reporting behavior.

These findings have several important implications. First, these findings demonstrate the importance of regulatory design features on reporting decisions. My theory and results imply that reporting managers are more likely to comply with descriptive standards, regardless of who is providing them. On the other hand, compliance with injunctive standards will be maximized when managers identify with the standard setter. Together, these results further our understanding of the role social forces play in the standard setting environment, allowing regulators to better anticipate the reaction and the effect of the promulgated standards or regulations (Christensen and Demski 2007, 362). By anticipating how managers will respond to standards, regulators can better identify standards that will have a high probability of achieving conformity.

Second, these results contribute to the discussion regarding a top-down versus bottom-up approach to standard setting (e.g. discussion by Biondi et al. [2012]—the American Accounting Association‘s Financial Accounting Standards Committee [FASC]). In particular, if the SEC and FASB are willing to incorporate more descriptive standards that come from the practice (bottom-up), *who* provides the standard becomes less important. However, if the SEC and FASB continue with a top-down approach to design standards, then my findings suggest that it is important to find ways to increase reporting managers' identification with standard setters. One might achieve this outcome

by increasing practitioner involvement in standard setting, or at least making their current involvement more salient.

The paper proceeds as follows: the next section examines the background of U.S. accounting standard setting since the inception of the SEC. The third section considers social norms and Social Identity Theory, and how they impact managers' willingness to comply with reporting standards. It then presents the study's hypothesis. The fourth section describes the research method, and the fifth section presents the results of the study. The sixth section discusses the study's limitations, conclusions, and implications for regulation of the profession and for future research.

II. Background

In this section I provide a brief history of the evolution of standard setting in the US since the inception of the SEC. While views of what has changed in the reporting environment and the reasons for those changes are subject to interpretation, my goal is only to demonstrate that there has been variability in the *type* of standards and in *who* provides them.

The Securities Exchange Act of 1934 established the SEC as an independent regulatory agency with the authority to enforce the Securities Act of 1933 and to prescribe the form and content of financial statements contained in registration statements (Zeff 1995). Assigned the arduous task of prescribing proper accounting practice, the SEC recruited the assistance of accounting practitioners by urging the American Institute of Accountants to endow its Committee on Accounting Procedure (CAP) with the authority to set out "proper accounting practice, which became known as 'generally accepted accounting principles' " (Zeff 2009, 5).[3] Although the SEC maintained the authority to prescribe and enforce accounting standards, the CAP was left with the primary responsibility of determining best practices (Zeff 2009). During this time period, accounting standards essentially evolved from practice, being principles "so generally accepted that they should be followed by all listed companies" (Carey 1969, 177), consistent with the notion of generally accepted accounting principles.

An early and continued point of contention between the CAP and the SEC was the latter's demand for increased uniformity in accounting treatments by reducing the

[3] "The government agency sought to tap the expertise of the organized accountancy profession because it did not itself possess the expertise or resources – or the will – to sort out proper from improper accounting practice" (Zeff 2009, 5).

number of alternative accounting practices. However, the CAP emphasized in 1939, and later reiterated, that,

> Although uniformity is a worthwhile goal, it should not be pursued to the exclusion of other benefits. Changes of emphasis and objective as well as changes in conditions under which business operates have led, and doubtless will continue to lead, to the adoption of new accounting procedures. Consequently diversity of practice may continue as new practices are adopted before old ones are completely discarded. (AIA 1953, 7-8)

But not many years later, under continued pressure by the SEC to narrow the areas of difference in reporting practice, the AICPA modified its approach to the development of accounting principles, beginning its concession to the SEC to narrow acceptable practices. The Special Committee on Research Program stated,

> The general purpose of the Institute in the field of financial accounting should be to advance the written expression of what constitutes generally accepted accounting principles, for the guidance of its members and of others. This means something more than a survey of existing practice. It means continuing effort to determine appropriate practice and to narrow the areas of difference and inconsistency in practice. In accomplishing this, reliance should be placed on persuasion rather than on compulsion. (AICPA 1958, 62-63)

While standards were becoming less descriptive and the set of acceptable practices narrowed, the AICPA's intended means for achieving compliance was through persuasion, and not compulsion. Yet, the SEC demanded more from the CAP's (1939-1959) successor, the Accounting Principles Board (APB) (1959 -1973). The APB was to severely reduce the range of acceptable practices, or face government involvement (Zeff 1984, 466). To illustrate, in November 1965, then Chairman of the SEC, Manuel Cohen, made the following statement,

> While some action has been taken by the accounting profession, the overall picture is not encouraging. In this area, as in so many others, the job will be done better, and compliance will be more willing and therefore more thorough, if the initiative is shared with, if not assumed by, the industry. We would rather have it that way, if you will let us. I say this despite the fact that we are now considering some limited action of our own in

this area—action which is not designed to undermine the efforts of the leaders of the profession but rather to emphasize to the entire profession the urgency of immediate and effective support of those who are seeking sound procedures to obviate unjustified differences in the treatment and presentation of similar problems. (1965, 10-11)

In 1973, the Financial Accounting Standards Board assumed responsibility from the APB for providing authoritative support for standard setting. In response, the SEC publicly announced, in Accounting Series Release (ASR) No. 150, "principles, standards and practices promulgated by the FASB in its Statements and Interpretations will be considered by the Commission as having substantial authoritative support, and those contrary to such FASB promulgations will be considered to have no such support" (SEC 1973, footnotes omitted – quoted in Zeff [1995], 57). However, the SEC again made it clear that it alone possessed the statutory authority to set accounting standards, and that it was not precluded from taking initiatives in the setting of standards (Zeff 1995). During the FASB's tenure, the SEC and the FASB have been in almost daily contact on all phases of the development of each standard. Zeff describes the two parties as having differing views of their relationship,

While an SEC chief accountant has generously depicted the relationship between the SEC and the private sector standard setter as a "partnership," an APB member during its final days preferred a very different characterization: the SEC is "top management power" and the APB is "lower management: analyzer, formulator, implementer" (Horngren 1972, 38). Without question, the agendas of the successive standard setters and many of their pronouncements have been powerfully shaped by signals emanating from the SEC. (1995, 61)

More recent congressional actions exemplify this characterization. Congress has made it clear that it is not afraid to intervene in standard setting, as demonstrated by the passing of Sarbanes–Oxley Act of 2002 and Dodd-Frank 2010, as well as its response to the fair value crisis. In his testimony during the mark-to-market hearing (U.S. House of

Representatives 2009, 23), Representative Scott Garrett of the House Committee of Financial Services reiterated to Robert Herz, then FASB chairman, that Congress wanted the FASB to respond to the financial crisis by addressing fair value accounting immediately. Emphasizing that if the SEC could not commit to addressing the fair value issues within three weeks, Congress would consider re-writing the entire financial structure itself.

This overview suggests that accounting standards have been moving away from merely describing practice, and towards limiting practice to alternatives preferred by standard setters. It further indicates that the profession, independent standard setters, regulators, and legislative bodies have all served as sources of accounting standards. As a result, it appears that GAAP has evolved from descriptive standards established by reporting managers (with whom other reporting managers presumably identify), to injunctive standards prescribed by standards setters (with whom reporting managers presumably identify less).

III. Theory and Development of Hypothesis

Conformity to Social Norms

Social norms influence compliance and conformity behavior in a variety of accounting contexts. For example, people conform in their taxpaying behavior to perceived social norms (e.g., Blanthorne and Kaplan 2008; Bobek et al. 2007; Bobek and Hatfield 2003; Davis et al. 2003; Wallschutzky 1984; Wenzel 2004, 2005a). That is, people who believe noncompliance is common among their peers are more accepting of tax avoidance and are more likely to cheat on their taxes. In labor settings, social norms influence effort in several ways: social norms regarding what is an acceptable level of effort develop in firms and then are used as an expectation for effort among coworkers (Kandel and Lazear 1992); social norms of reciprocity endogenously arise, leading to the generation of noncompetitive wages and effort in a competitive market (Fehr et al. 1993, 1998); and social norms of worker productivity influence the productivity of coworkers in the same team (Mas and Moretti 2009).

Recent financial reporting studies find that religious social norms (i.e., descriptive norms [how people actually behave] that result from injunctive norms [e.g., rules or commandments] that condemn immoral behavior), such as a partiality for making ethical business decisions, correlate with lower incidences of financial reporting irregularities (McGuire et al. 2012), with less aggressive financial reporting choices (Dyreng et al. 2012), and with more conservative going concern opinions (Omer et al. 2010).

Although the evidence of influence of social norms on others' behavior is pervasive, social norms do not always influence individuals' behavior to the same extent. Focus Theory of Normative Conduct (Cialdini et al. 1990, 1991) proposes two

moderating factors. First, social norms can only influence behavior to the extent they are salient. Second, the salience of different types of norms can lead to differing perceptions about what is appropriate behavior in a given setting.

I examine the effect of two types of social norms, descriptive and injunctive norms. A *descriptive norm* refers to what is typical or normal behavior—what most people do. An *injunctive norm* refers to beliefs about what constitutes approved or disapproved behavior within the culture (Cialdini et al. 1990)—what people believe others will consider appropriate behavior (Cialdini et al. 1991). In short, descriptive norms refer to what *is* done, whereas injunctive norms refer to perceptions of what *ought* to be done (Goldstein and Cialdini 2010). A distinction between the two types is not always necessary because it is not uncommon for the descriptive norm to be the same as the injunctive norm when individuals behave in a manner consistent with the injunctive norm. For example, most people probably believe they are not supposed to talk while in the library (injunctive norm), and people generally behave in a consistent manner (descriptive norm). Yet, there are other cases in which the descriptive and injunctive norms differ. For example, while most people probably believe they should not steal supplies from the office (injunctive norm), it may very well be the case that people actually do take supplies home (descriptive norm).

While prior accounting research has found social norms to be influential, it is unclear how individuals determine their peers' behavior and whether their perceptions are accurate. For example, individuals tend to underestimate the extent to which others pay taxes, and giving them accurate information increases compliance (Wenzel 2005b). In a financial reporting context, reporting managers may infer their peers' behavior from SEC

communications. Referring to the state of financial reporting compliance in the U.S., former SEC chairman Arthur Levitt stated,

> Too many corporate managers, auditors, and analysts are participants in a game of nods and winks. In the zeal to satisfy consensus estimates and project a smooth earnings path, wishful thinking may be winning the day over faithful representation. As a result, I fear that we are witnessing an erosion in the quality of earnings, and therefore, the quality of financial reporting. Managing may be giving way to manipulation; integrity may be losing out to illusion. (1998)

While this statement probably was meant to make explicit the injunctive norm that the SEC and investors disapprove of misreporting, it also communicated that managers misreport, despite strong disapproval. As a result, Levitt's statement may have had an unintended consequence of reducing reporting compliance as opposed to deterring it. That is, it may have led managers to infer that their peers do not comply with reporting standards (descriptive norm), and then to comply with this descriptive norm of aggressive reporting. Therefore, it is possible that the depiction of a noncompliant descriptive norm may have actually undermined the effectiveness of the compliance-oriented injunctive norm.

To assess the relative effectiveness of injunctive versus descriptive norms for achieving compliance, Cialdini and colleagues (Cialdini [2003]; Cialdini et al. [2006]) examined a setting in which different types of norms were used to promote compliance. They manipulated the type of norm by creating two signs, paired with a statement, both intended to deter the stealing of petrified wood from a national park. The injunctive norm sign stated, "Please don't remove the petrified wood from the park, in order to preserve the natural state of the Petrified Forest," and included an image of a visitor stealing a piece of wood with a red circle and bar superimposed over the hand. The descriptive

norm sign, intended to emphasize the descriptive norm of noncompliance, stated, "Many past visitors have removed the petrified wood from the park, changing the natural state of the Petrified Forest," and included a picture of several visitors taking pieces of wood. The descriptive norm message resulted in significantly more theft than both the control (no sign) and injunctive norm condition; and the injunctive norm message resulted in marginally less theft than the control condition. These results corroborate the assertion that descriptive norms have powerful effect on peoples' behavior.

I posit that descriptive accounting standards can be powerful for two primary reasons. First, descriptive accounting standards that describe how peers behave make the descriptive norm salient, whereas injunctive accounting standards leave managers to infer how their peers behave. As a result, the injunctive standards fail to leverage the social influence of the descriptive norm. Second, the mechanisms through which descriptive and injunctive norms guide and influence behavior are different (Goldstein and Cialdini 2010). That is, descriptive norms work via a heuristic process, and injunctive norms work via a more elaborate cognitive process—the influence of the injunctive norm is mediated by its persuasiveness (Cialdini 2003; Goldstein and Cialdini 2010). Descriptive norms appear to activate the heuristic rule "do as others do" because this approach increases chances of survivorship. This behavioral herding heuristic is consistent with animals grouping together to reduce predation risk or social sanctioning. Injunctive norms, on the other hand, allow individuals to infer what behavior is acceptable, but not necessarily how others behave. This becomes an issue for regulators when individuals have incentives to violate the injunctive norm, such as in a financial reporting context (e.g., managers may have incentives to manage earnings to meet earnings benchmarks). In this

case, I assert that managers will cognitively evaluate the trade-offs associated with compliance versus noncompliance and thus make the decision to comply based on the persuasiveness of the injunctive norm.

To test whether descriptive and injunctive norms are mediated through different mechanisms, Cialdini and colleagues (Cialdini et al. [2010] as recounted in Goldstein and Cialdini [2010]) conducted a study in which participants watched a public service announcement that contained information either about the descriptive norm or the injunctive norm in favor of recycling. After watching the public service announcement advertisement, participants assessed the persuasiveness of the ads and their recycling intentions. The researchers found that the effect of injunctive norm information on recycling intentions was mediated by participants' evaluations of the ads' persuasiveness, whereas the effect of the descriptive norm information on recycling intentions was direct.

How a descriptive norm is conveyed is less important. Individuals tend to follow the descriptive norm as they would follow a herd: showing little regard for the appropriateness of the action, and more regard for whether they perceive a similar situation or context as the group described (Goldstein and Cialdini 2010). That is, if the majority is doing it, then it is likely a safe course of action. Injunctive norms, on the other hand, will positively influence compliance decisions to the extent they are persuasive. Although there are several aspects of persuasion that could have bearing on an individual's decision, social norms research emphasizes social identification as a key moderator of social influence (Goldstein and Cialdini 2010). Thus, I focus on social identification with the source of a standard as a moderator of social influence on compliance behavior.

Social Identity and Social Influence

Social Identity Theory holds that individuals group themselves cognitively with others, based on similarities, and that identification is the perception of belonging to the group (Ashforth and Mael 1989; Turner 1987; Hogg 1987). Several factors can engender identification between an individual and a group. Some examples of factors that stimulate identification are as follows: situational cues that signal common interests and goals (Rousseau 1998), the perception of a similar fate (Ashforth and Mael 1989), same-team settings (Towry 2003), and tenure and familiarity with clients (King 2002; Bamber and Iyer 2007). In addition, "factors traditionally associated with group formation (interpersonal interaction, similarity, liking, proximity, shared goals or threat, common history, and so forth) may affect the extent to which individuals identify with a group" (Ashforth and Mael 1989, 25). Although formal association with a group, such as membership in a club or graduating from the same school, can engender identification, it is not necessary because identification is a perceptual construct—an individual need only perceive herself as psychologically intertwined with the group (Ashforth and Mael 1989).

Identification engenders adherence to, and the internalization of, the norms and values of the group to which one identifies (Ashforth and Mael 1989). For example, individuals' intentions to engage in healthy behavior (Terry and Hogg 1996) or to recycle (Terry et al. 1999) are significantly determined by the perceived norms of their peers and friends with whom they identify. Social identification influences auditor behavior in a variety of ways: greater social identity among auditors improves auditors' objectivity (King 2002); auditors who exhibit higher levels of professional identification are less likely to acquiesce to the client's position (Bamber and Iyer 2007); and auditor

identification with the client increases auditors' agreement with the client (Bauer 2011). I assert that the level of identification between reporting managers and the source of reporting guidance influences compliance with injunctive standards. Specifically, when the level of identification is high (low), the reporting manager will comply more (less) with injunctive reporting guidance.

In summary, I make several unique propositions. First, reporting managers infer social norms from reporting guidance. Second, the salience of different types of norms will lead to differing responses to the reporting guidance. Namely, when the level of identification is low, descriptive reporting guidance will lead to greater compliance than injunctive reporting guidance. This is because descriptive accounting guidance makes the descriptive norm salient and descriptive norms have a powerful effect on behavior.

Third, identification level moderates the effect of certain types of reporting guidance on reporting behavior. Specifically, when the reporting guidance is descriptive, managers' willingness to comply with accounting guidance will not be moderated by identification with the source of the guidance. That is, the influence of peer behavior (descriptive norm) is direct, persuasion does not moderate compliance. However, when the reporting guidance is injunctive, persuasion moderates compliance. Therefore, I posit that the injunctive norm influences behavior via a cognitive evaluation of the persuasiveness of the guidance, and I propose that managers will find guidance provided by a person they identify with more persuasive than guidance provided by an outsider. These predictions are summarized in the following hypothesis (see Panel A of Figure 1):

H1: Participants will comply with reporting guidance at the lowest level when identification with the source is low and reporting guidance is injunctive; participants will comply with reporting guidance at a higher level when reporting guidance is descriptive and/or identification with the source is higher.

IV. Method

Design, Task Overview, and Procedures

I test my hypothesis in an experiment with a full-factorial 2 x 2 between-participants design, with guidance type (descriptive, injunctive) and identification level (high, low) as manipulated independent variables. Participants made four reporting decisions while facing a direct trade-off between reporting aggressively to maximize wealth and reporting conservatively to comply with a standard. That is, more aggressive reporting would increase their earnings, while more conservative reporting would reduce earnings. This trade-off created an incentive to violate the standard, just as reporting managers with earnings-based or stock-based compensation can have incentives to violate reporting standards.

Participants were told that financial revenue needed to be estimated and reported to stakeholders. They were asked to decide what amount to report from a provided range. The range provided included a probability that each amount of revenue would be realized. The trade-off participants were faced with was then explained. That is, their reporting decisions would influence outcomes for people who would rely on the information reported[4] and the people who would rely on the reported information prefer more conservative revenue amounts be reported. This means that the people who would rely on their reported information prefer that there is a high probability that at least the reported amount would actually be realized. On the other hand, reporting a higher

[4] This was implemented by having some participants assigned the task of providing reporting guidance and their payoff was a function of how aggressively the other participants reported. This was not explained to the participants making reporting decisions so as not to introduce other factors that would influence their reporting decisions.

revenue amount could increase their payoff. However, reporting a higher revenue amount could increase the penalty if they were audited. The audit probability was explained and participants were told this was fixed at 30%. I then verified participants' understanding of the general task and the trade-off by asking them instruction questions that they had to answer correctly before advancing.

After verifying participants' understanding of the task, they made their first reporting decision. This reporting decision is used as a benchmark to assess the efficacy of the reporting guidance and it serves as a pre-test. The benchmark allows me to examine changes in reporting behavior, as opposed to absolute levels, and better isolate the effect of the manipulated variables. The instructions then explained the role of reporting guidance. Because their reporting decisions would also influence people who would rely on the information reported, two study participants would be randomly selected to provide guidance intended to promote the interests of those who would rely on the information they reported.[5] Participants saw this reporting guidance before they made their three remaining reporting decisions and it preceded each decision. In the instructions example and for each decision, participants were given a table calculating their payoff for each revenue amount if they were or were not audited and an expected payoff based on the audit probability (see Appendix A).[6] After making the last three

[5] Consistent with how the study was described, I did select two participants to act as guidance providers. They also served as users for my study; meaning their payoff was higher the more conservatively the other participants chose to report.

[6] It was explained that the audit outcome would not be realized until all four decisions were made and one decision was randomly selected to determine their payoff at the end of the study.

reporting decisions, participants finished by completing a post experimental questionnaire.

Independent Variables

I manipulate the guidance type (descriptive, injunctive) by either using the following descriptive or injunctive guidance, respectively:

Most participants in this study report revenue for which there is at least an 80% probability the actual amount will be realized.

You should report revenue for which there is at least an 80% probability the actual amount will be realized.

Both forms are then followed by a graphical example and a table of expected payoffs, as illustrated in Appendix B and Appendix A, respectively. The descriptive form of the guidance is intended to describe how people *are* behaving while injunctive form describes how people *should* be behaving.[7]

To manipulate identification level, I first randomly assigned participants to one of two groups—the ORANGE group or the PURPLE group. Participants were informed that,

While everyone here is completing the same study, each color-coded group has a different exchange rate for converting earnings to entries. The color-coded group you belong to will determine which exchange rate will be used to convert your laboratory dollars (₤) to entries for the bonus drawing. Two different exchange rates have already been determined; they were randomly assigned at the start of this study.

[7] Cialdini and colleagues (Cialdini 2003; Cialdini et al. 2006, 2010; Reno et al. 1993) generally manipulated type of norm (descriptive, injunctive) by using different cues (e.g., a no littering sign for the injunctive and the presence of litter for the descriptive) or messages (e.g., messages condemning behavior for the injunctive and a description of peer behavior for the descriptive). I have chosen to manipulate just a few words to reduce the introductions of other idiosyncratic differences between the two messages that might increase noise in the manipulation. 80% was chosen by design to be a conservative level so I could observe compliance. I used pilot data from the injunctive norm conditions to establish that the descriptive norm was indeed that most participants reported at least at the 80% probability level.

I then randomly assigned each participant a person providing guidance that belonged to either of the two groups. If the person providing guidance was from the same (different) group as the participant, identification level is coded as high (low). I reproduce this manipulation in Appendix C. Recall that identification is defined as the perception of belonging to a group (Ashforth and Mael 1989; Turner 1987; Hogg 1987). This identification manipulation procedure is similar to the minimal group paradigm that involves categorizing people into groups based on superficial or ostensible criterion (Brewer 1979). Prior research has shown that identification even can be fostered by random assignment to groups (e.g., determined by a coin flip [Billig and Tajfel 1973], a lottery [Locksley et al. 1980], or randomly assigned color [Towry 2003]). I reinforced participants' group identity in two ways. First, participants in the same group shared a common fate— their exchange rate. Prior research shows that sharing a common fate, such as a financial outcome, increases group identification (Ashforth and Mael 1989). Second, participants saw their group name and logo on the header of all subsequent pages. I did not reveal the exchange rates to participants to avoid introducing any effects associated with having a higher or lower exchange rate.

I used a minimal and abstract experimental design to avoid complicating the scenario and the incentives. This method allows me to build policy-relevant theoretical insights from the ground up—starting with the examination of a few aspects of standard setting before examining a larger set (Kachelmeier and King 2002, 225). The simplicity of the setting also allows me to target the effects of norms and social identification on compliance behavior, and to isolate the construct of theoretical interest while testing the validity of the theory (2002, 225). I purposefully avoid using context-specific terms (e.g.,

participants were not referred to as "standard setters" or "managers") to limit the introductions of norms or priors established outside the laboratory (Tayler and Bloomfield 2011, 766).

Participants

I recruited 105 participants, who then participated online, via Amazon Mechanical Turk. Mechanical Turk participants tend to be highly representative of the general U.S. population (see Paolacci et al. [2010] for demographic breakdown). Participants spent an average of 16 minutes completing the study, and received a fixed $1.50 payment upon completion. All participants had the chance to win a $10 bonus. Participants were informed that earning a higher payoff increased their odds of winning the $10 bonus. Because the task was relatively abstract, no particular institutional knowledge or accounting background was necessary to perform the task. I have no reason to believe that participants' knowledge or experience would directly influence how participants behaved in this task, or interact with any of the other independent variables.

Dependent Variable

My primary dependent variable is the extent to which participants comply with the provided reporting guidance. The four reporting decisions asked participants to select a revenue amount to report from an 11-point range (1 = lowest revenue, 11 = highest revenue). For the first reporting decision, participants did not receive guidance. For the three remaining decisions, reporting guidance preceded each reporting decision. The dollar amounts I assigned to the revenue range were the same for decisions 1 and 2, but different for both decisions 3 and 4. However, the expected payoff range was held constant across all four reporting decisions. The revenue amounts are scaled by using the

point values from the 11-point range. To measure compliance and test my hypothesis, I compute a difference score that I call change in reported revenue. I subtract participants' scaled reported revenue after receiving guidance (Decision 2) from scaled reported revenue before receiving guidance (Decision 1).[8] Because the guidance requests participants to report a lower revenue amount, more positive changes represent higher compliance.

[8] The reported analysis uses only Decision 1 and Decision 2, because they are the most comparable (same revenue amounts on the range). Decisions 3 and 4 were added using different range amounts to ensure my results were not sensitive to the magnitude of the dollar amounts on the range. The results are not sensitive to the dollar amounts and the results are inferentially the same if I use all four reporting decisions or use the first and any of the last three reporting decisions to compute the differences score. The mean for Decision 2 (mean = 4.88) is neither different from the mean for Decision 3 (mean 4.75, $p = 0.34$) nor the mean for Decision 4 (mean = 5.01, $p = 0.41$).

V. Results

Instruction and Manipulation Checks

To ensure participants properly attended to the details of the reporting guidance, I asked participants in the post-experimental questionnaire to recall the guidance level referred to in the reporting guidance. Ninety percent of participants (94 of 105) correctly answered this question. To assess the effectiveness of the identification level manipulation, I asked participants to indicate on an 11 point Likert scale (1 = "not at all", 11 = "very strongly"), "How strongly do you feel you identify with the Orange group?" I then asked the same question regarding the Purple group. Participants indicated they identified significantly more with their own group than with the other group (means = 7.18 and 3.55 for the same and other groups, respectively; paired $t_{104} = 11.58$, $p < 0.01$; these results for the same and other groups did not significantly vary by group [Orange vs. Purple], respectively; $p = 0.92$, $p = 0.34$). To ensure participants properly attended to their respective groups, I asked participants "To which group did you belong in this study?" (ninety-nine percent of participants [103 of 105] answered correctly) and "To which group did the person providing you with reporting guidance belong?" (ninety-eight percent of participants [103 of 105] answered correctly). The reported analyses use all one-hundred and five observations. Excluding observations with a failed manipulation check only strengthens the reported results.

Preliminary Analysis

A preliminary question is whether the reporting guidance significantly affected reporting decisions compared to a benchmark reporting decision without reporting guidance. I test this question by comparing the amount of change in the reported revenue

in the direction of the reporting guidance, first for all participants and then within each condition. Regardless of condition, the mean reported revenue is lower after receiving guidance than before receiving guidance (4.88 versus 6.64; paired $t_{104} = 8.69$, $p < 0.01$). Within each condition, the mean reported revenue is lower after receiving guidance than before receiving guidance (all p-values < 0.01), indicating that guidance was effective in increasing compliance in all conditions.[9]

Tests of Hypothesis

H1 predicts that participants will comply with reporting guidance at the lowest level when identification with the source is low and reporting guidance is injunctive; participants will comply with reporting guidance at a higher level when reporting guidance is descriptive and/or identification with the source is higher. (see Panel A and Panel B of Figure 1 to see a graphical representation of the predicted and observed effects, respectively). Table 1, Panel A, reports cell sizes, means and standard deviations of my dependent measure –change in reported revenue– for all four conditions. The mean change in reported revenue is smallest in the low identification/injunctive guidance condition (0.88), and largest in the high identification/injunctive guidance condition (2.37). In the traditional ANOVA model (Table 1, Panel B), neither guidance type nor identification is significant, but the interaction is significant ($F_{1,101} = 6.86$, $p = 0.010$, two-tailed). Because H1 predicts an ordinal interaction (i.e., an asymmetric pattern of cell means), I test it with a linear contrast of cell means (i.e., contrast coding, Buckless and Ravenscroft [1990]). The test for an ordinal interaction using the interaction from the

[9] The p-values remain below 0.01 when I use median values and a Wilcoxon signed-rank test

traditional ANOVA is less powerful than a specific contrast test. Table 1, Panel C reports the results of the planned contrast used to test my hypothesis. The contrast is significant ($F_{1,101} = 6.07$, $p = 0.008$, one-tailed), consistent with the predicted interaction. A semi-omnibus test (untabulated) confirms that the residual variance attributable to main and interactive effects of guidance type and identification level after accounting for my planned contrast is not significant ($F_{2,101} = 1.16$, $p = 0.315$).

Results from the simple main effects tests presented in Panel D of Table 1 provide additional support for the predicted interaction. When identification with the source is low, participants' change in reported revenue is higher when participants received descriptive guidance than when participants received injunctive guidance ($p = 0.013$, one-tailed), further supporting H1. When participants received injunctive guidance, participants' change in reported revenue in the high identification condition is significantly lower than participants' change in reported revenue in the low identification condition ($p = 0.005$, one-tailed), further supporting H1. However, when participants received descriptive guidance, there is no significant difference in participants' change in reported revenue between high and low identification conditions ($p = 0.298$, two-tailed), further supporting H1.

In summary, results provide support for the predictions in H1. Specifically, when identification with the source is low, descriptive guidance is more effective than injunctive reporting guidance. Furthermore, identification with the source of guidance modifies the effectiveness of injunctive, but not descriptive guidance.

Additional Analysis

I perform additional tests to demonstrate that the results are robust to other factors that might influence compliance with the reporting guidance.

Risk Aversion

Risk aversion may influence managers' willingness to report aggressively because reporting aggressively widens the distribution of potential payoffs. I measured risk aversion by asking participants in the post-experimental questionnaire to indicate their agreement with the following statements on a nine-point Likert scale ranging from "Strongly disagree" (1) to "Strongly agree" (9): "I am willing to take high financial risks in order to realize higher average yields." and "I like taking big financial risks." These questions have been previously used to measure risk aversion (Pennings and Smidts 2000). The two responses are highly correlated ($r = 0.86$, $p < 0.001$), so I use factor analysis to obtain a single factor that I call "risk aversion" (eigenvalue = 1.77). When I include this measure as a covariate in the test for H1, the main effect of risk aversion is not significant ($p = 0.755$). The pattern of adjusted means matches the pattern displayed in Panel B of Figure 1, and the interaction remains significant ($F_{1,100} = 9.33$, $p = .003$, one-tailed).

Accounting Knowledge

Accounting knowledge may also influence willingness to report aggressively. To test for this possibility and to ensure that the influences of guidance type and identification with the source of guidance are robust to different levels of accounting knowledge, I include accounting knowledge in my tests. I measure accounting knowledge by asking participants to indicate the number of accounting classes they have taken.

When I include this measure as a covariate in the test for H1, the main effect of accounting classes is not significant (p = 0.772). The pattern of adjusted means matches the pattern displayed in Panel B of Figure 1, and the interaction remains significant ($F_{1,100}$ = 4.02, p = .048, one-tailed). When I only include those who have taken accounting classes, despite the lack of statistical power (n = 42), I observe a pattern of cell means matching that displayed in Panel B of Figure 1, and the contrast remains significant ($F_{1,38}$ = 6.86, p = .013, one-tailed).

VI. Conclusion

In this paper, I examine how compliance with reporting guidance depends jointly on the type of guidance and identification with the guidance provider. Consistent with predictions, when the level of identification is low, I first find that descriptive guidance leads to greater compliance with reporting guidance, compared to injunctive guidance. Second, I find that identification impacts compliance behavior when reporting guidance is injunctive, but not when it is descriptive. I also find that reporting guidance, in general, is effective for influencing reporting behavior.

The theory and findings I present in this study make several contributions. First, while the extant norms literature has examined how personal and situational similarities between a target individual and a group of people influence the target's adherence to the group's social norms, this is the first study to examine how identification between a target individual and the *source* of norm-related information influences adherence to those norms. Second, given that prior research has found social norms to be highly influential, these results provide insights as to how these norms can be communicated and leveraged in the standard setting environment. In particular, my findings highlight the role standards play in communicating perceptions of how others behave and what is acceptable behavior. In addition, these results have several important implications for the regulatory environment. Specifically, these results suggest that when reporting guidance is descriptive, persuasive cues may be less important for influencing individuals' willingness to comply with reporting guidance. However, when reporting guidance is injunctive, identification and other persuasive cues influence individuals' willingness to comply with reporting guidance.

This study is subject to certain limitations, which provide opportunities for future research. First, since I only focus on a few aspects of standard setting, there are other factors that may moderate the effect guidance on compliance. For example, manipulating the level of enforcement could moderate the effects I observe. The ease of enforcing various guidance types may also be different because injunctive standards tend to be more rules based, which prior literature has shown moderates enforcement (Kadous and Mercer 2011; Donelson et al. 2012). Second, I use participants that have less knowledge and experience regarding financial reporting than actual reporting managers, and these differences may also moderate the effects I observe. For example, participants who are less experienced with the reporting context may be more willing to conform to others' behavior because they are less likely to have an expectation of appropriate behavior. Future research could examine whether more experienced managers exhibit similar judgments in response to differences in these financial reporting features of interest. Finally, I only examine one source of persuasion, identification with the source of the guidance, yet there are likely many other persuasion factors that might influence reporting behavior.

Influential academics view U.S. GAAP as having become more injunctive since the inceptive of the SEC (Jamal et al. 2005). To the extent this is true, these findings suggest that these standards may be less compelling, especially if reporting managers do not identify with standard setters. This raises questions of whether or not reporting managers identify with members of the FASB and whether managers view FASB members as peers or as out-group regulators. It may be the case that as the FASB becomes further removed from practitioner groups, like the AICPA, managers may find it

more difficult to identify with members of the FASB. In which case, as standards become more injunctive, reporting managers may be less compelled to comply with reporting standards.

My results suggest that descriptive norms can have a powerful effect on reporting behavior. To the extent that desirable descriptive norms can be cultivated, highlighting these norms provides an opportunity to the leverage the power of social influence. Standard setters might consider ways to develop desirable descriptive norms from practice. For example, standard setters could provide firms with a set of acceptable reporting alternatives to see if a prevailing alternative emerges. Alternatively, it is also likely that undesirable descriptive norms are very influential. In this case, regulators may want to avoid publicizing negative descriptive norms.

VII. References

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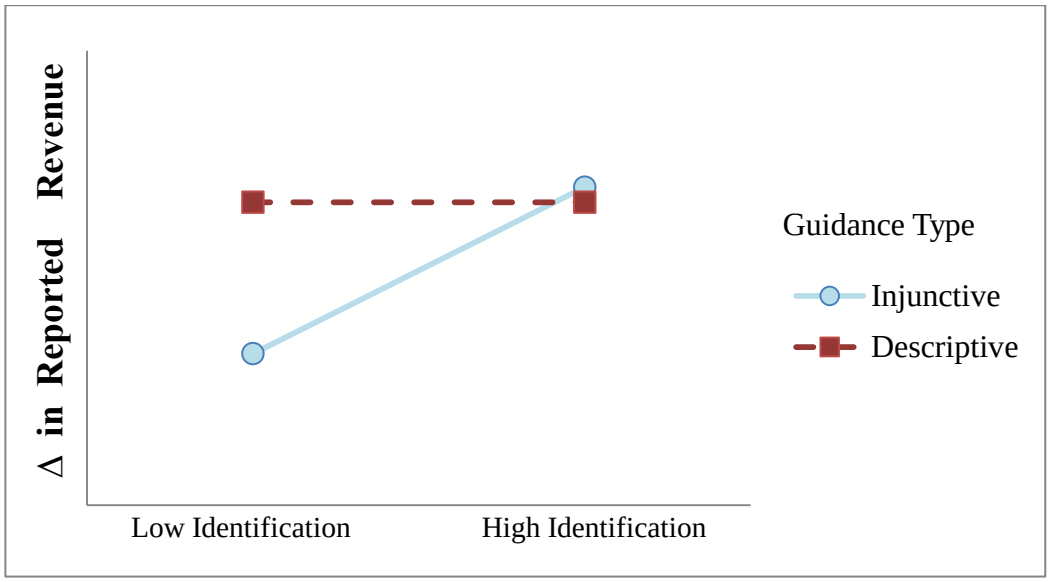
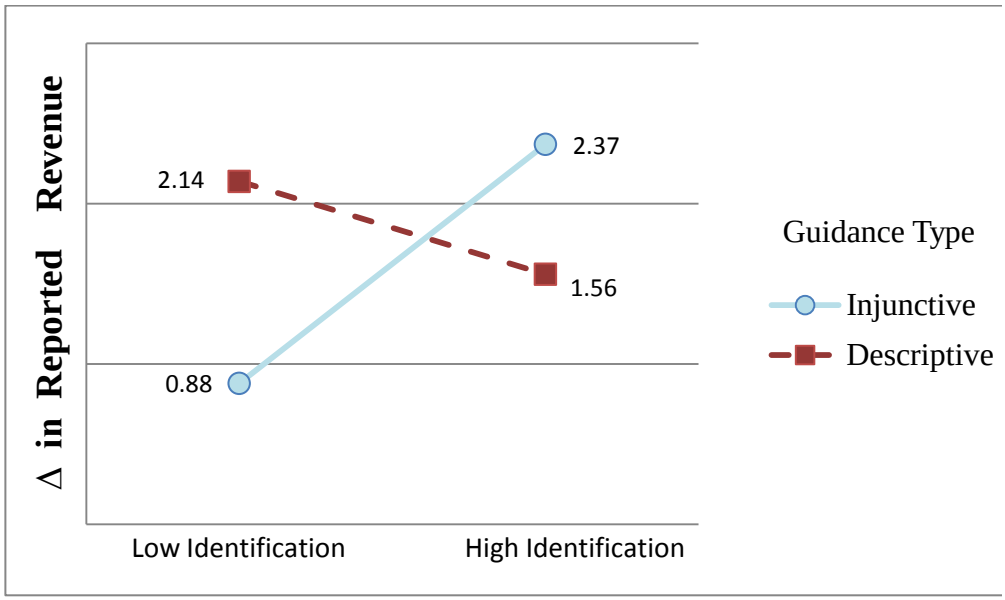
Figure 1: The Effect of Identification and Guidance Type on Compliance

Panel A: Predicted Effects



Panel B: Observed Effects



Panel A depicts the pattern consistent with the hypothesized interactive effects of *guidance type* and *identification level* on change in participants' reported revenue (H1). Panel B depicts the observed pattern of cell means of change in participants' reported revenue (see Table 1, Panel A). This pattern is tested using the ANOVA presented in Panel B and Simple Main Effects in Panel C of Table 1.

Table 1: Descriptive Statistics and Tests of Hypothesis 1

Panel A: Descriptive Statistics for H1 – Change in participants' scaled reported revenue [standard deviations]

		Identification Level		
	n	High	n	Low
Guidance Type				
Descriptive	25	1.56[2.06]	28	2.14[2.22]
Injunctive	27	2.37[2.20]	25	0.88[1.48]

Panel B: ANOVA Results

Source	*df*	*SS*	*MS*	*F-ratio*	*p-value*
Identification	1	5.39	5.39	1.31	0.254
Guidance Type (GT)	1	1.34	1.34	0.33	0.569
Identification × GT	1	28.14	28.14	6.86	0.010
Error	101	414.14	4.10		

Panel C: Planned Contrast

Source	*df*	*SS*	*MS*	*F-ratio*	*p-value*
[H1]† Contrast	1	24.93	24.93	6.07	0.015
Error	101	414.52	4.10		

Panel D: Tests of Simple Main Effects

	df	*F-ratio*	*p-value*
Effect of identification given injunctive guidance	1	7.03	0.009
Effect of identification given descriptive guidance	1	1.09	0.298
Effect of guidance type given low identification	1	5.13	0.026
Effect of guidance type given high identification	1	2.08	0.152

Participants responded to four questions (one benchmark decision without guidance and three with guidance) that asked them to select a revenue amount to report from an 11-point range. The revenue amounts on the range were the same for decisions 1 and 2 but different for both decisions 3 and 4. The revenue amounts are scaled by using the point values (1-11) on the range. The changes reported in this table use the change from Decision 1 (the benchmark decision without guidance) and Decision 2 (the first decision with guidance but still using the same revenue amounts on the scale). Change values could range from +10 to −10. The results are inferentially the same when the change is calculated using the average of the three latter decisions that are accompanied with guidance.

†[H1]: Participants will comply with reporting guidance at the lowest level when identification is low and reporting guidance is injunctive; participants will comply with reporting guidance at a higher level under all other combinations of identification level and guidance type (contrast weights are +1, +1, +1, and −3, respectively).

All p-values are two-tailed

Appendix A: Expected Payoff Table

This appendix reproduces the expected payoff table provided to participants for each reporting decision. The revenue amounts varied between three of reporting decisions but the expected payoffs were held constant across the four decisions.

Your expected payoffs for possible reporting decisions are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average Payoff
£0	£1,000	£1,000	£1,000
£100,000	£1,100	£1,000	£1,070
£200,000	£1,200	£990	£1,137
£300,000	£1,300	£970	£1,201
£400,000	£1,400	£940	£1,262
£500,000	£1,500	£900	£1,320
£600,000	£1,600	£850	£1,375
£700,000	£1,700	£790	£1,427
£800,000	£1,800	£720	£1,476
£900,000	£1,900	£640	£1,522
£1,000,000	£2,000	£550	£1,565

Based on a 30% audit probability, the column on the right provides you with a weighted-average of the two. This "Weighted-average payoff" is a statistically expected outcome for each choice— it does not reflect your actual payoff.

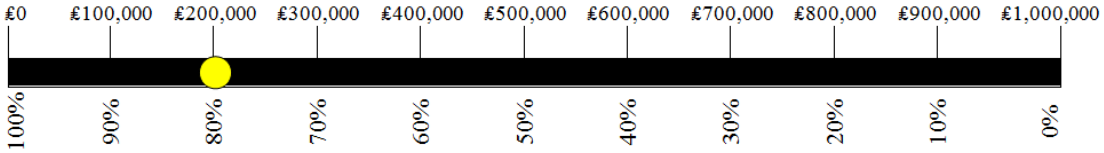
Appendix B: Guidance Type Manipulation

Following the guidance instructions shown in Appendix C, one of two possible reporting guidance types was provided. This appendix reproduces the two reporting guidance types. These examples come from the second reporting decision.

Part 1: Descriptive Reporting Guidance Type

Most participants in this study report revenue for which there is at least an 80% probability the actual amount will be realized. For example:

Reporting decision #2: This revenue has been determined to fall in the range of £0 to £1,000,000.

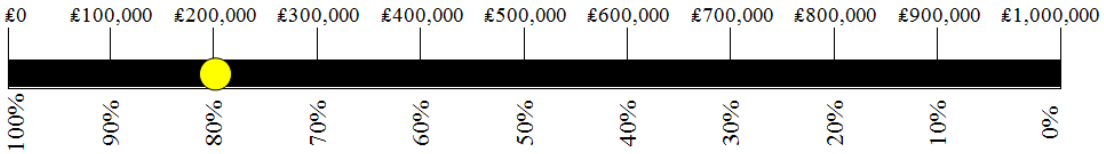


The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Part 2: Injunctive Reporting Guidance Type

You should report revenue for which there is at least an 80% probability the actual amount will be realized. For example:

Reporting decision #2: This revenue has been determined to fall in the range of £0 to £1,000,000.



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Appendix C: Identification Level Manipulation

This appendix provides the two parts of the identification level manipulation. Participants were first randomly assigned to one of the two groups (the "/" indicates the two group forms). In the second part of the manipulation, the group of the person providing guidance was randomly determined. If the group of the person providing guidance is the same (different) as the participant's group, identification level is coded as high (low).

First part of the manipulation

Color-Coded Groups

There are two color-coded groups in the study (ORANGE and PURPLE). You have been assigned to the ORANGE/PURPLE group. While everyone here is completing the same study, each color-coded group has a different exchange rate for converting earnings to entries. The color-coded group you belong to will determine which exchange rate will be used to convert your laboratory dollars (₤) to entries for the bonus drawing. Two different exchange rates have already been determined; they were randomly assigned at the start of this study.

Second part of the manipulation

Guidance

Because your reporting decisions will also influence people who rely on the information reported, one study participant will be randomly selected to represent the interests of the people who will rely on the information you will report.

The individual selected will provide you with guidance intended to promote the interests of those who will rely on the information you report.

You will see this guidance before each of your reporting decisions.

The individual from the ORANGE/PURPLE Group is providing you with the following guidance:

Appendix D: Experiment Instrument

Note: Emory logo indicates a new page. [ ] indicates alternate condition.

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Instructions: Financial Reporting

Thank you for your participation.

For the validity of this study, it is critical that you work alone, and that you do not use any materials other than those provided in this study. **Please work through the materials provided, reading all materials carefully before proceeding, and answering questions in the order asked.**

In order to verify your understanding of the instructions, questions will be included throughout the study that will verify your understanding. You MUST answer these questions correctly to satisfy the requirements of study, so please read through the study carefully.

Payment:
In order to receive payment you must
(1) complete the study- at the end of which you will receive a unique Response ID, and
(2) follow the link provided at the end of the study that will return you to Mechanical Turk where you can enter your Response ID and complete the hit to receive payment.

>>

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Your Group
You are a member of the ORANGE[PURPLE] Group!

Overview
In this study, you will make four reporting decisions. You will then answer a few questions about your decisions and yourself. For the main part of the study, you will be given financial information and then will be asked to decide how you would like to report that information to stakeholders. You will be paid based on your decisions as explained below.

Chance of winning $10 Bonus
In this study, one participant will be selected to receive a MT "bonus payment" of $10. You increase your chances of receiving this $10 by earning more laboratory dollars called Lira (₤). How many laboratory dollars you earn will be determined by the decisions you make. The Lira you earn is converted into entries for the drawing for the $10 bonus. Thus, earning more laboratory dollars, Lira (₤), increases your chances of receiving the $10 bonus.

Color-Coded Groups
There are two color-coded groups in the study (ORANGE and PURPLE). You have been assigned to the ORANGE[PURPLE] group. While everyone here is completing the same study, each color-coded group has a different exchange rate for converting earnings to entries. The color-coded group you belong to will determine which exchange rate will be used to convert your laboratory dollars (₤) to entries for the bonus drawing. Two different exchange rates have already been determined; they were randomly assigned at the start of this study.

Instructions question:

You increase your chances of winning the $10 bonus by _____

- earning more experimental dollars called Lira (₤).
- nothing, everyone's chances are the same.
- earning fewer experimental dollars called Lira (₤).

>>

Correct.

- You increase your chances of winning the $10 bonus by earning more experimental dollars called Lira (₤).

>>

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Your Reporting Decisions

Companies report financial revenue to people outside the company who rely on the information. Sometimes revenues are easy to calculate, but often estimation is required. In this study, you need to decide what amount to report for four revenues. In each case, you have information about the highest and lowest possible amounts, but you must select a specific number within the range to report.

The Impact of Reporting Decisions

Your reporting decisions will influence outcomes for you and for people who rely on the information reported. **You face a tradeoff.** Reporting a higher revenue amount can increase your payoff, which can increase your chances of winning the $10 bonus. However, reporting a higher revenue amount can increase your penalty if you are audited, and this would reduce your chances of winning the $10 bonus. Furthermore, the people who rely on reported financial information prefer more conservative (lower) revenue amounts be reported. That is, they prefer that there is a high probability that **at least** the reported amount will actually be realized.

Before going on, please answer the following questions to show that you understand the instructions:

In general, your expected payoff increases as you report a _____

- ○ higher revenue amount
- ○ lower revenue amount
- ○ neither, your decision has no impact on your payoff

The people who rely on your reported revenue prefer you report a _____

- ○ higher, less likely revenue amount
- ○ lower, more likely revenue amount
- ○ neither, they are indifferent

>>

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Correct.

- Your expected payoff increases as you report a higher revenue amount.
- The people who rely on your reported revenue prefer you report a lower, more likely revenue amount.

>>

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ORANGE[PURPLE] Group

Expected Payoffs
Your pay will only depend on only **one** of your four reporting decisions. I will randomly select one of your decisions and calculate your pay based on the following formula:

Expected[Payoff] = £1,000 + £[your reported revenue] – $p \times$ £[audit penalty]
where p = *the probability of an audit*

Thus, your expected payoff in this study depends on:

1. which of the 4 decisions is randomly selected
2. the amount of revenue you report for that decision
3. whether that decision is audited (see below)

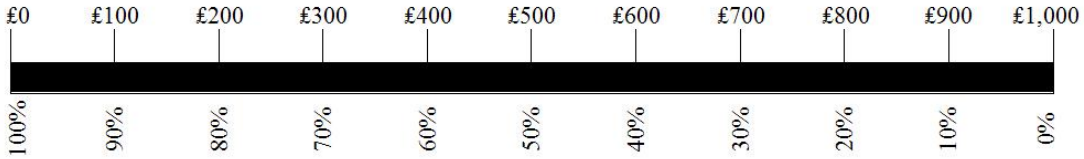
Audits and Penalties
It is possible that your reporting decision that is randomly selected will be audited. If you are audited, you will be assessed a penalty as illustrated by the "Payoff if audited" column. The audit penalty is higher for higher reported revenue amounts.

The probability of being audited is 30% and is the same for you and all other participants in the study. The audit probability is already determined and is not based on your reporting choices.

Here is an example of a reporting decision you will make.

Reporting decision example: This revenue has been determined to fall in the range of £0 to £1,000.

Select a revenue amount you would like to report:



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Note: page continued

Your expected payoffs for possible reporting decisions are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average Payoff
£0	£1000	£1000	£1000
£100	£1100	£1000	£1070
£200	£1200	£990	£1137
£300	£1300	£970	£1201
£400	£1400	£940	£1262
£500	£1500	£900	£1320
£600	£1600	£850	£1375
£700	£1700	£790	£1427
£800	£1800	£720	£1476
£900	£1900	£640	£1522
£1000	£2000	£550	£1565

Based on a 30% audit probability, the column on the right provides you with a weighted-average of the two. This "Weighted-average payoff" is a statistically expected outcome for each choice– it does not reflect your actual payoff.

Instructions question:

Your payoff depends on _____
Check all that apply

- [ ] only one randomly selected reporting decision
- [ ] all four reporting decisions
- [ ] The amount of revenue you report
- [ ] whether the selected decision is audited

>>

Correct.

Your expected payoff in this study depends on:

1. which of the 4 decisions is randomly selected
2. the amount of revenue you report for that decision
3. whether that decision is audited

>>

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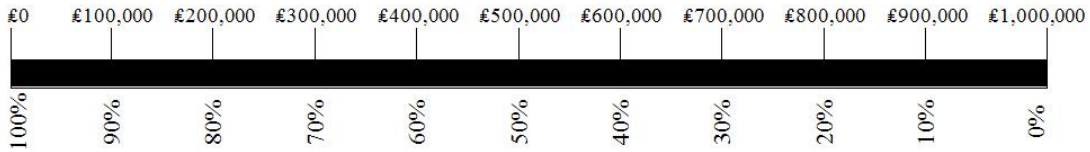
ORANGE[PURPLE] Group

You will now make your first reporting decision.

Reporting decision #1: This revenue has been determined to fall in the range of £0 to £1,000,000.



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Select below the revenue amount you would like to report:

£0	£100,000	£200,000	£300,000	£400,000	£500,000	£600,000	£700,000	£800,000	£900,000	£1,000,000
○	○	○	○	○	○	○	○	○	○	○

The calculations of expected payoff at different levels of reported revenue are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average payoff
£0	£1,000	£1,000	£1,000
£100,000	£1,100	£1,000	£1,070
£200,000	£1,200	£990	£1,137
£300,000	£1,300	£970	£1,201
£400,000	£1,400	£940	£1,262
£500,000	£1,500	£900	£1,320
£600,000	£1,600	£850	£1,375
£700,000	£1,700	£790	£1,427
£800,000	£1,800	£720	£1,476
£900,000	£1,900	£640	£1,522
£1,000,000	£2,000	£550	£1,565

>>

ORANGE[PURPLE] Group

Guidance
Because your reporting decisions also influence people who rely on the information reported, one study participant will now be selected to represent the interests of the people who will rely on the information you will report.

This individual will be selected to provide you with guidance for making your decisions. This guidance is intended to promote the interests of those who will rely on the information you report. You will see this guidance before each of your remaining reporting decisions.

Instructions question:

The person providing you with guidance represents the interests of _____

- you
- the people who rely on your decisions
- neither, they don't represent anyone's interests

>>

Correct.

- The person providing you with guidance represents the interests of the people who rely on your decisions

>>

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ORANGE[PURPLE] Group

Guidance

As previously mentioned, reporting decisions influence people that rely on the information reported. One individual has been selected (from either group) to represent the interests of the people who will rely on the information you will report.

An individual from the ORANGE[PURPLE] Group is providing you with guidance.

This individual was randomly selected to provide you with guidance for making your remaining decisions. This guidance is intended to promote the interests of those who will rely on the information you report.

>>

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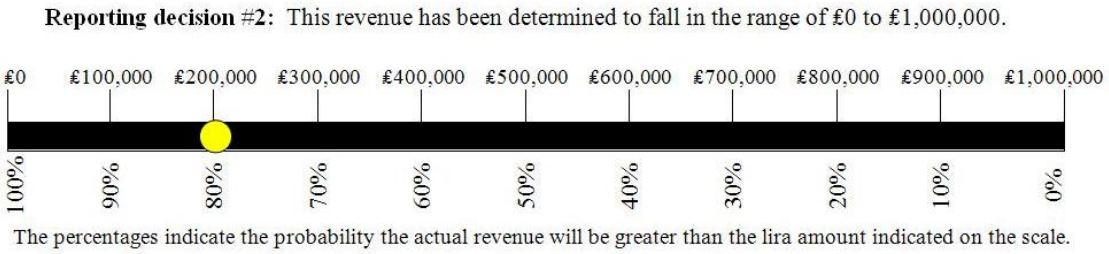
ORANGE[PURPLE] Group

Guidance
An individual from the ORANGE[PURPLE] Group is providing you with the following guidance:

Note: [Injunctive condition]

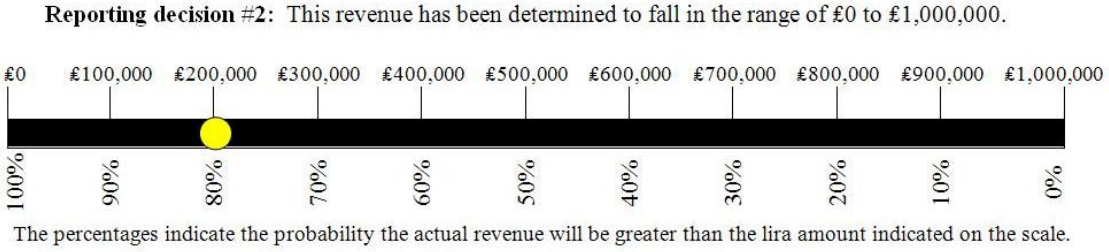
You should report revenue for which there is at least an 80% probability the actual amount will be realized. For example:



>>

Note: [Descriptive condition]

Most participants in this study report revenue for which there is at least an 80% probability the actual amount will be realized. For example:



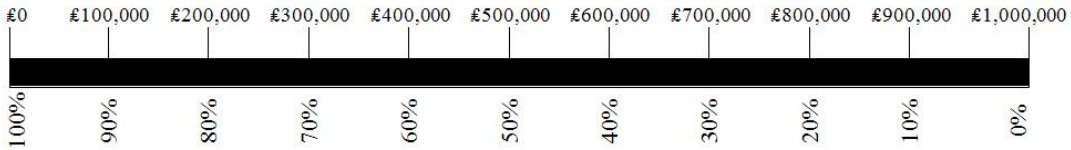
>>

Note: page continued (guidance still seen on the screen)

You will now make your remaining reporting decisions.

Your Decision

Reporting decision #2: This revenue has been determined to fall in the range of £0 to £1,000,000.



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Select below the revenue amount you would like to report:

£0	£100,000	£200,000	£300,000	£400,000	£500,000	£600,000	£700,000	£800,000	£900,000	£1,000,000
○	○	○	○	○	○	○	○	○	○	○

The calculations of expected payoff at different levels of reported revenue are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average payoff
£0	£1,000	£1,000	£1,000
£100,000	£1,100	£1,000	£1,070
£200,000	£1,200	£990	£1,137
£300,000	£1,300	£970	£1,201
£400,000	£1,400	£940	£1,262
£500,000	£1,500	£900	£1,320
£600,000	£1,600	£850	£1,375
£700,000	£1,700	£790	£1,427
£800,000	£1,800	£720	£1,476
£900,000	£1,900	£640	£1,522
£1,000,000	£2,000	£550	£1,565

>>

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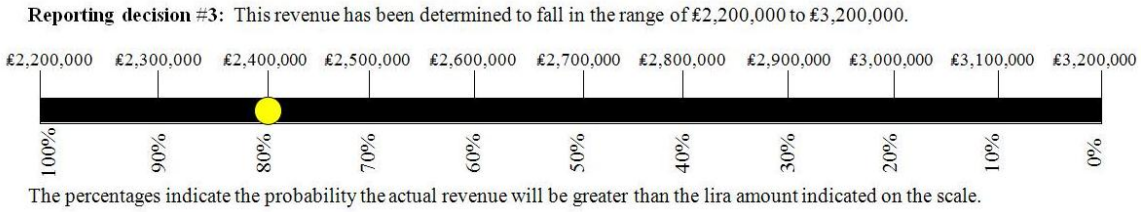
ORANGE[PURPLE] Group

Guidance
An individual from the ORANGE[PURPLE] Group is providing you with the following guidance:

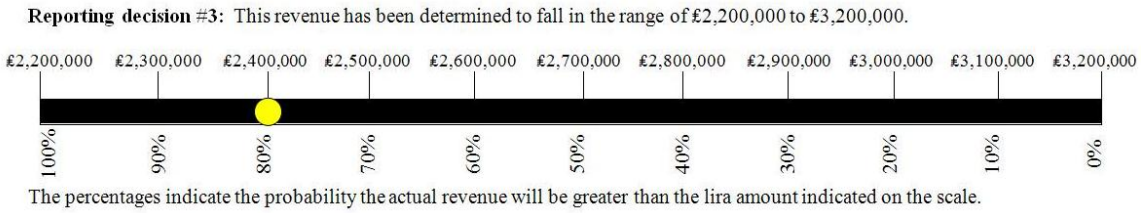
Note: [Injunctive condition]

You should report revenue for which there is at least an 80% probability the actual amount will be realized. For example:



Note: [Descriptive condition]

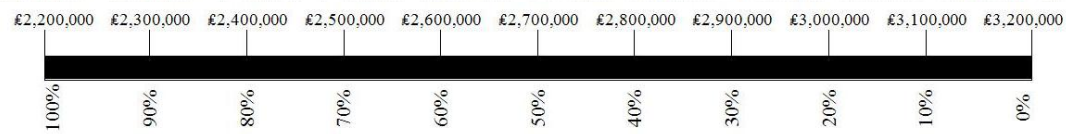
Most participants in this study report revenue for which there is at least an 80% probability the actual amount will be realized. For example:



Note: page continued (guidance still seen on the screen)

Your decision

Reporting decision #3: This revenue has been determined to fall in the range of £2,200,000 to £3,200,000.



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Select below the revenue amount you would like to report:

£2,200,000 £2,300,000 £2,400,000 £2,500,000 £2,600,000 £2,700,000 £2,800,000 £2,900,000 £3,000,000 £3,100,000 £3,200,000

The calculations of expected payoff at different levels of reported revenue are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average payoff
£2,200,000	£1,000	£1,000	£1,000
£2,300,000	£1,100	£1,000	£1,070
£2,400,000	£1,200	£990	£1,137
£2,500,000	£1,300	£970	£1,201
£2,600,000	£1,400	£940	£1,262
£2,700,000	£1,500	£900	£1,320
£2,800,000	£1,600	£850	£1,375
£2,900,000	£1,700	£790	£1,427
£3,000,000	£1,800	£720	£1,476
£3,100,000	£1,900	£640	£1,522
£3,200,000	£2,000	£550	£1,565

>>

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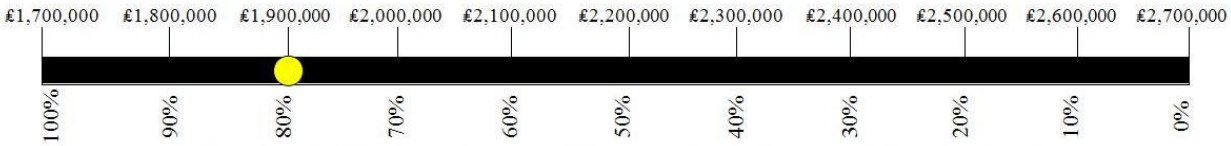
ORANGE[PURPLE] Group

Guidance
An individual from the ORANGE[PURPLE] Group is providing you with the following guidance:

Note: [Injunctive condition]

You should report revenue for which there is at least an 80% probability the actual amount will be realized. For example:

Reporting decision #4: This revenue has been determined to fall in the range of £1,700,000 to £2,700,000.

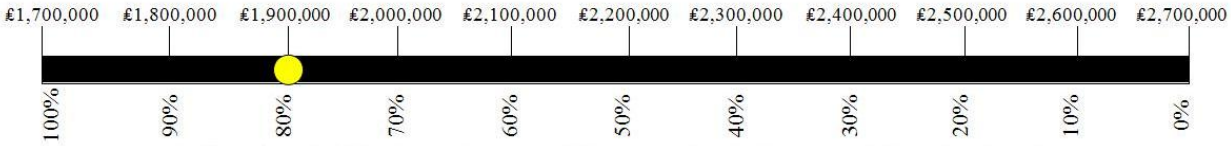


The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Note: [Descriptive condition]

Most participants in this study report revenue for which there is at least an 80% probability the actual amount will be realized. For example:

Reporting decision #4: This revenue has been determined to fall in the range of £1,700,000 to £2,700,000.

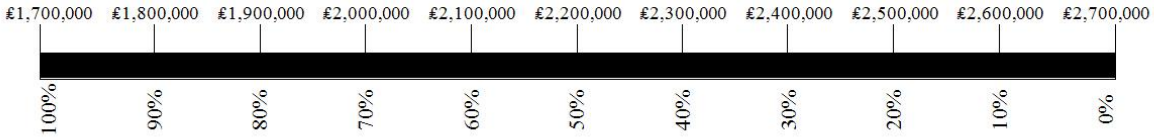


The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Note: page continued (guidance still seen on the screen)

Your decision

Reporting decision #4: This revenue has been determined to fall in the range of £1,700,000 to £2,700,000.



The percentages indicate the probability the actual revenue will be greater than the lira amount indicated on the scale.

Select below the revenue amount you would like to report:

£1,700,000	£1,800,000	£1,900,000	£2,000,000	£2,100,000	£2,200,000	£2,300,000	£2,400,000	£2,500,000	£2,600,000	£2,700,000
○	○	○	○	○	○	○	○	○	○	○

The calculations of expected payoff at different levels of reported revenue are provided below.

If you report revenue of	Payoff if not audited	Payoff if audited	Weighted-average payoff
£1,700,000	£1,000	£1,000	£1,000
£1,800,000	£1,100	£1,000	£1,070
£1,900,000	£1,200	£990	£1,137
£2,000,000	£1,300	£970	£1,201
£2,100,000	£1,400	£940	£1,262
£2,200,000	£1,500	£900	£1,320
£2,300,000	£1,600	£850	£1,375
£2,400,000	£1,700	£790	£1,427
£2,500,000	£1,800	£720	£1,476
£2,600,000	£1,900	£640	£1,522
£2,700,000	£2,000	£550	£1,565

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FINAL QUESTIONS

Please answer the following questions about the case that you completed today.

1. To which group do you belong in this study?

Please check one:

- ORANGE Group
- PURPLE Group

2. To which group does the person providing reporting guidance to you belong?

Please check one:

- ORANGE Group
- PURPLE Group

3. What was the percentage of confidence referred to in the reporting guidance you were given?

Please provide your response in the space below:

4. How similar do you feel you are to the person who provided you with guidance?

Not at All										Very Similar
1	2	3	4	5	6	7	8	9	10	11
○	○	○	○	○	○	○	○	○	○	○

>>

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5. How strongly do you feel you identify with the ORANGE Group?

Not at All 1	2	3	4	5	6	7	8	9	10	Very Strongly 11
○	○	○	○	○	○	○	○	○	○	○

6. How strongly do you feel you identify with the PURPLE Group?

Not at All 1	2	3	4	5	6	7	8	9	10	Very Strongly 11
○	○	○	○	○	○	○	○	○	○	○

7. In general, how similar do you feel you are to the other participants in this study?

Not at All 1	2	3	4	5	6	7	8	9	10	Very Similar 11
○	○	○	○	○	○	○	○	○	○	○

>>

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8. How persuasive was the reporting guidance you were provided?

Not at All					Moderately					Very Persuasive
1	2	3	4	5	6	7	8	9	10	11
○	○	○	○	○	○	○	○	○	○	○

9. Regarding your reporting decisions, to what extent were you were making an ethical decision versus a business decision?

Ethical Decision										Business Decision
1	2	3	4	5	6	7	8	9	10	11
○	○	○	○	○	○	○	○	○	○	○

10. Compared to the amount that you reported, how much do you think others reported?

Significantly Less										Significantly More
1	2	3	4	5	6	7	8	9	10	11
○	○	○	○	○	○	○	○	○	○	○

11. How was the reporting guidance you received worded?

- ○ You should report revenue for which there is at least an ...
- ○ Most participants in this study report revenue for which there is at least an ...
- ○ No reporting guidance was shown.

For the following questions, please indicate on the scale the extent to which you agree or disagree with each of these statements.

1. I often consult other people to help choose the best alternative available from a product class.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Note: page continued

2. If I want to be like someone, I often try to buy the same brands that they buy.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

3. It is important that others like the products and brands I buy.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

4. To make sure I buy the right product or brand, I often observe what others are buying and using.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

5. I rarely purchase the latest fashion styles until I am sure my friends approve of them.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

6. I often identify with other people by purchasing the same products and brands they purchase.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

7. If I have little experience with a product, I often ask my friends about the product.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

8. When buying products, I generally purchase those brands that I think others will approve of.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

Note: page continued

9. I like to know what brands and products make good impressions on others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

10. I frequently gather information from friends or family about a product before I buy.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

11. If other people can see me using a product, I often purchase the brand they expect me to buy.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

12. I achieve a sense of belonging by purchasing the same products and brands that others purchase.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

13. I am willing to take high financial risks in order to realize higher average yields.

Strongly disagree				Neither agree nor disagree				Strongly agree
1	2	3	4	5	6	7	8	9
○	○	○	○	○	○	○	○	○

14. I like taking big financial risks.

Strongly disagree				Neither agree nor disagree				Strongly agree
1	2	3	4	5	6	7	8	9
○	○	○	○	○	○	○	○	○

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For the following questions, please indicate on the scale the extent to which you agree or disagree with each of these statements.

1. I'd rather depend on myself than others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

2. I rely on myself most of the time; I rarely rely on others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

3. I often do "my own thing."

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

4. My personal identity, independent of others, is very important to me.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

5. It is important that I do my job better than others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

6. Winning is everything.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Note: page continued

7. Competition is the law of nature.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

8. When another person does better than I do, I get tense and aroused.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

9. If a coworker gets a prize, I would feel proud.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

10. The well-being of my coworkers is important to me.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

11. To me, pleasure is spending time with others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

12. I feel good when I cooperate with others.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

13. Parents and children must stay together as much as possible.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7

Note: page continued

14. It is my duty to take care of my family, even when I have to sacrifice what I want.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

15. Family members should stick together, no matter what sacrifices are required.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

16. It is important to me that I respect the decisions made by my groups.

Strongly disagree			Neither agree nor disagree			Strongly agree
1	2	3	4	5	6	7
○	○	○	○	○	○	○

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17. In just a few sentences, please explain why you did or did not follow the guidance you were provided?

Note: page continued

Please answer the following questions about yourself.

1. What is your first language?

2. Please indicate your gender:
   - Female
   - Male

3. What is the highest level of education you have completed?
   - Grammar school
   - High school or equivalent
   - Vocational/technical school (2 year)
   - Some college
   - Bachelor's degree
   - Master's degree
   - Doctoral degree
   - Professional degree (MD, JD, etc.)
   - Other

4. Please indicate the number of accounting and finance classes you have taken.

	Accounting	Finance
Number of Classes		

5. What is your annual household income? (optional)

less than $30,000	$30,001 - $50,000	$50,001 - $75,000	$75,001 - $100,000	more than $100,000

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Thank you for completing the survey.

Copy or write down this Response ID.

This is your **Response ID**: R_danU8OZGMQBt60I

You need this Response ID in order to receive payment.
Please return to mechanical turk and enter your Response ID to complete the HIT and ensure you will receive payment.

Thanks!